Aluminum statistical review for 1986

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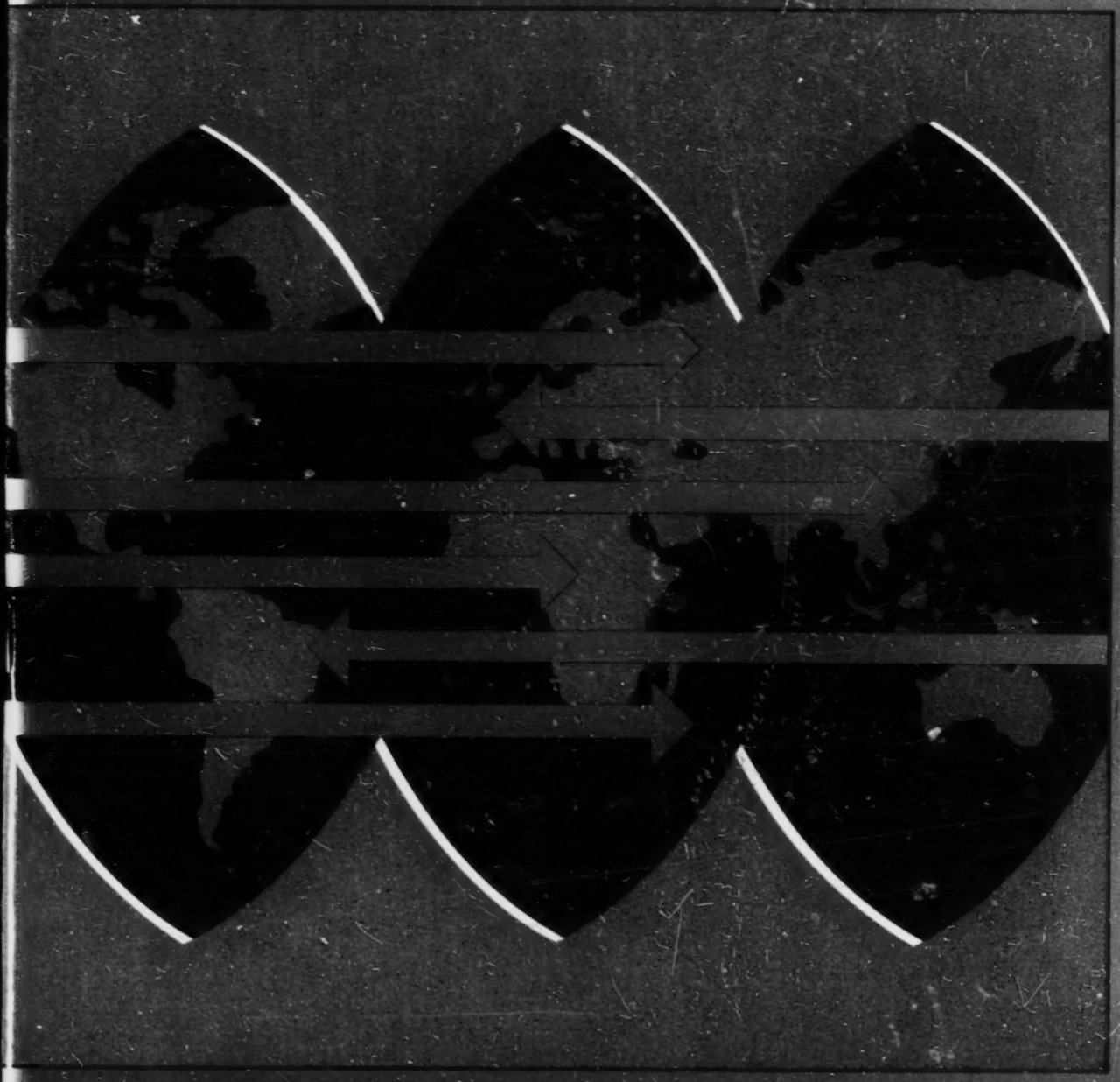

Aluminum statistical review for 1986

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Contents

The Aluminum Association does not warrant the accuracy or completeness of any data in this Review. All data contained herein are subject to revision.

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Introduction to Aluminum Statistics

ABOUT THE REVIEW

The Aluminum Association's Statistical Review for 1986 assembles in one place the most important statistical data available on the aluminum industry. It includes information on every cycle of the aluminum production process from primary aluminum to markets for finished goods.

The Aluminum Association, Inc., representing the United States aluminum industry, is the primary source for statistics, standards and other information on aluminum and the industry.

The Review is divided into five major sections: shipments, markets, supply, U.S. foreign trade, and world statistics. Each section is preceded by an introduction and description summary of the tables that follow. In addition each graph or table has a description and highlights. The Review shows detailed shipment figures for 23 separate product categories. A glossary of industry terms is appended as well.

Capsule Review

Millions of Pounds	1986	1985
Total Supply	14,597	14,537
Primary Production	6,699	7,715
Primary Capacity (Year-end)	8,475	9,579
Shipments to Major Markets		
Building and Construction	3,159	3,032r
Transportation	3,107	3,049r
Consumer Durables	1,199	1,066r
Electrical	1,386	1,416
Machinery & Equipment	848	832
Containers & Packaging	4,247	4,105r
Other	479	569r
Total Domestic Shipments	14,425	14,069r
Exports	911	1,204
Total Shipments	15,336	15,273r

r—Revised

Architects and developers find extensive and innovative aluminum product lines to suit their need for a "new Look".

1986 Highlights

14,425 million pounds of aluminum were shipped to U.S. markets in 1986, up 2.5 percent from the 1985 level of 14,069 million pounds. Aluminum exports of ingot and semi-fabricated products, however, decreased 24.3 percent in 1986 to 911 million pounds.

Total aluminum shipments, including exports, rose in 1986 to level of 15,336 million pounds, an increase of 0.4 percent from 1985 shipments of 15,273 million pounds.

Total aluminum imports into the U.S. (including scrap) increased to 4,426 million pounds in 1986, a 37.3 percent jump over 1985 levels. Imports of aluminum ingot totaled 2,974 million pounds in 1986, a 55.3 percent increase over the 1985 imports of 1,915 million pounds. Total imports of aluminum mill products in 1986 were 1,089 million pounds, a 6.7 percent increase over 1985 imports of 1,021 million pounds.

Consumer imports of mill products totalled 954 million pounds in 1986, up 16.9 percent from 1985 and achieved a 7.7 percent penetration of U.S. mill product consumption. Historically, the U.S. had been a net exporter of aluminum mill products, but this changed starting in 1983.

"Net" shipments exclude intra-industry shipments for further fabrication. It is the most accurate measure of industry output to markets because it eliminates duplication. Reported receipts of aluminum for further processing are subtracted.

The **United States supply** of aluminum in 1986 rose 0.4 percent to a level of 14,537 million pounds. Domestic primary production decreased 13.2 percent to 6,699 million pounds, imports of aluminum ingot and mill products were up 38.4 percent to 4,063 million pounds and domestic recovery from scrap accounted for 3,834 million pounds, a 1.3 percent decrease from 1985.

Containers and Packaging continue to be the industry's largest market in 1986 with a volume of 4,247 million pounds and accounting for 27.7 percent of the total 1986 shipments. This market increased 3.5 percent over 1985 shipments of 4,105 million pounds.

The second largest market for 1986 was the **Building and Construction** market totaling 3,159 million pounds and accounting for 20.6 percent of the total shipments, increased 4.2 percent over 1985. The **Transportation** market 1986 shipments of 3,107 million pounds increased 1.9 percent over 1985 levels.

The **Electrical** market showed a decrease of 1.9 percent from 1985 with 1986 shipments at 1,386 million pounds. **Consumer Durables** shipments rose 12.5 percent to 1,199 million pounds in 1986.

Shipments to the nonelectrical **Machinery and Equipment** market increased to 848 million pounds, a rise of 1.9 percent.

Acknowledgements

The data for this **REVIEW** were developed by the Statistical and Market Research Committee of the Aluminum Association, Inc. along with the cooperation of the following organizations: National Association of Aluminum Distributors; Can Manufacturers Institute, Bureau of the Census, U.S. Department of Commerce; and the Bureau of Mines, U.S. Department of the Interior.

The **Aluminum Statistical Review** for 1986 was compiled and edited by Nicholas A. Adams, Manager, Product and Market Statistics.

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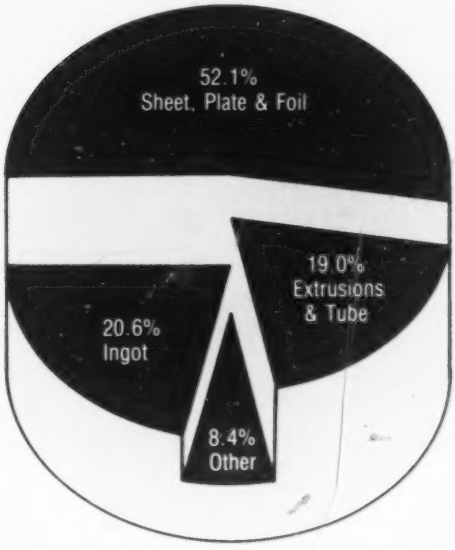
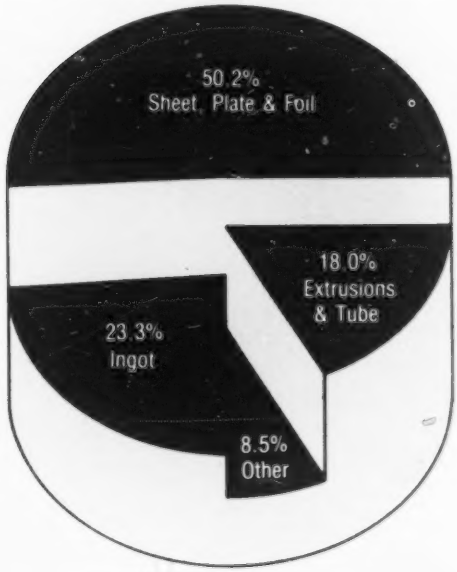
This edition covers in most tables the years 1976-1986. Data on the years 1960-1980 are available in a companion publication: "**Aluminum Statistical Review—Historical Supplement.**" Contact the Aluminum Association for further information.

U.S. Aluminum Industry Shipments

Percentage Distribution by Major Products: 1986



Percentage Distribution by Major Products: 1985



*Other

Conductor	4.4 (4.7)
Rod, Bar, Wire, Forgings & Impacts	3.3 (3.1)
Powder	0.7 (0.7)

NOTE: 1985 percentages are shown in parentheses.

U.S. INDUSTRY SHIPMENTS DOWN 0.5 PERCENT

Total net shipments in 1986 amounted to 14,382 million pounds, 0.5 percent less than the 14,456 million pounds shipped in 1985.

The adjacent pie chart shows that the largest product category of sheet, plate and foil represented 52.1 percent of total shipments in 1986 (50.2% in 1985). Ingot for castings, destructive uses and exports accounted for 20.6 percent (23.3% in 1985) and extruded products and tube shipments were 19.0 percent (18.0% in 1985) of total shipments.

Excluding net imports, sheet and plate and foil volume of 7,490 million pounds were up 3.2 percent from 1985. Extruded products and tube shipments totaled 2,729 million pounds, up 4.9 percent from 1985.

Total shipments to U.S. consumers at 15,366 million pounds were up 0.4 percent from the 1985 level of 15,273 million pounds. Exports decreased 24.4 percent from their 1985 level of 1,204 million pounds.

DESCRIPTION:

Total aluminum industry shipments presented on the next page are net shipments to U.S. consumers and for export. To avoid duplication, the figures do not include any intra-industry shipments for further fabrication into mill products. Imported ingot and mill products shipped to U.S. consumers are included.

Net shipments of ingot include domestic and import shipments and represent primary and secondary ingot shipments for export, for castings and destructive uses. Net shipments of mill products are shown separately for domestic and import. Mill product imports to aluminum producers are not included in total industry shipments. These imports are further processed by the producer into another mill product which is included in the total.

Imports to consumers are included in total industry shipments. These consumers fabricate the aluminum into a finished product. Imported mill products are net of receipts by producers of mill products. Imported mill products data include reimports of metal exported for processing and returned for further processing.

The pie charts illustrate the distribution of net shipments of aluminum ingot and mill product groups during 1986 and 1985. They include net shipments of ingot and domestic mill products but exclude imported mill products, because import data are not available in the same detail as domestic shipments of mill products. The distribution is based on data shown on pages 6 and 7. The imported mill products are shown on page 5.

For information on years prior to 1976 see the Aluminum Statistical Review—Historical Supplement.

Total Industry Shipments

Millions of Pounds

Net Shipments	1986 % Total	1986 Amount	1985 % Total	1985 Amount	1986-1985 % Change	1976-1986 % Annual Growth (3)
Total	100.0	15,335.6	100.0	15,272.5r	+ 0.4	+ 1.5
Ingot	19.3	2,963.5	22.0	3,364.7r	- 11.9	+ 2.3
Mill Products	80.7	12,372.1	78.0	11,907.6	+ 3.9	+ 1.3
U.S. Producer	74.5	11,418.2	72.6	11,091.5	+ 2.9	+ 0.6
Consumer Imp.	6.2	953.9	5.3	816.1	+ 16.9	+ 16.9
U.S. Exports	5.9	910.8	7.9	1,204.2	- 24.4	+ 2.3
U.S. Consumers	94.1	14,424.8	92.2	14,073.9	+ 2.5	+ 1.5

Total Industry Shipments 1976-1986

Millions of Pounds

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
Net Shipments											
Total	15,335.6	15,272.5r	15,521.3	14,153.2	12,505.1	13,814.4	14,351.0	14,867.3	14,425.3	12,986.0	12,425.1
Ingot	2,963.5	3,364.7r	3,579.5	3,044.8	3,090.3	3,236.4	3,723.8	3,287.0	2,672.3	2,388.3	2,540.1
Mill Products											
U.S. Producer	11,418.2	11,091.5	11,075.9	10,577.5	9,026.8	10,337.6	10,484.9	11,230.4	11,346.0	10,442.9	9,705.6
Consumer Imp.	953.9	816.1	865.9	530.8	388.0	240.2	142.3	349.9	407.0	154.8	178.3
U.S. Exports	910.8	1,204.2	1,076.4	1,240.9	1,294.7	1,370.0	2,193.3	1,022.9	747.4	712.2	820.5
U.S. Consumers(1)	14,424.8	14,073.9	14,444.9	12,912.3	11,210.4	12,444.4	12,157.7	13,844.4	13,677.9	12,273.8	11,604.6

Detail may not add to totals due to rounding.

SOURCES: Current Industrial Report Series M33.2
Mill products: exports, imports: U.S. Department of Commerce, Bureau of The Census, Foreign Trade Division, and CIR Series M33.2

(1) Shipments to consumers in the U.S. are calculated by subtracting exports of ingot and mill products from total industry shipments. Includes no adjustment for inventories in the hands of consumers.

Mill Products Imports 1976-1986

Millions of Pounds

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
Total Imports(1)											
Total	1,088.9	1,020.7	1,089.7	618.3	455.6	303.9	168.1	426.3	484.5	164.8	189.0
Sheet & Plate	836.0	770.1	884.5	536.1	414.8	247.1	126.1	357.3	433.7	128.7	150.5
Rod & Bar	128.9	128.7	86.3	27.4	10.1	34.2	16.3	38.0	22.1	18.1	20.9
Other	123.9	121.9	118.9	54.9	30.7	22.6	25.7	31.0	28.7	18.0	17.6
Imports to Consumers(1)											
Total	953.9	816.1	865.9	531.7	388.0	240.2	142.3	349.9	407.0	154.8	178.3
Sheet & Plate	798.4	680.3	746.6	477.4	357.7	205.6	115.7	317.0	371.0	124.7	144.8
Rod & Bar	51.3	24.1	5.8	9.3	1.2	12.3	9.1	2.2	9.7	12.4	16.1
Other	104.1	111.7	113.5	45.1	29.2	22.3	17.5	30.7	26.3	17.7	17.3
Imports to Producers(2)											
Total	135.1	204.6	223.8	86.7	67.6	63.7	25.8	76.4	77.5	10.0	10.8
Sheet & Plate	37.6	89.8	137.9	58.8	57.2	41.5	10.4	40.3	62.7	4.0	5.7
Rod & Bar	77.6	104.6	80.5	18.1	8.9	21.9	7.2	35.8	12.4	5.7	4.8
Other	19.9	10.2	5.4	9.8	1.5	0.3	8.2	0.3	2.4	0.3	0.3

*"Less than 50 thousand pounds.

Detail may not add to totals due to rounding.

(1) Includes reimports of metal exported for processing and returned for further processing (TSUSA 806.30).

(2) Product detail estimated by Aluminum Association from published ranges.

(3) Annual growth rate calculated by straight line least squares method.

SOURCES: U.S. Department of Commerce, Bureau of The Census, Foreign Trade Division and CIR Series M33.2

Shipments

Net Shipments of Ingot and Mill Products
Excludes Mill Product Imports to Consumers 1954-1986

Millions of Pounds

Year	Total aluminum	Total ingot	Primary ingot	Secondary ingot[3][4]	Extusion ingot[3]	Total mill products	Sheet & Plate nonheat treatable	Sheet & Plate heat treatable	Foil	Forgings Impacts[2]
1954	3 006 8	920 2	425 7	494 5	—	2 086 6	768 2	243 6	153 3	
1955	3 997 2	1 205 4	509 9	695 5	—	2 791 8	1 049 6	295 0	198 2	70 3
1956	4 109 3	1 223 5	520 1	703 4	—	2 885 8	1 050 6	327 0	190 5	75 7
1957	3 839 2	1 161 6	458 2	703 4	—	2 677 6	943 8	248 7	204 0	64 3
1958	3 571 1	974 0	368 6	605 4	—	2 597 1	944 4	209 1	199 6	50 8
1959	4 961 1	1 575 0	751 4	803 4	20 2	3 386 1	1 284 6	231 3	252 6	53 8
1960	4 657 7	1 608 6	852 3	665 2	91 1	3 049 1	1 203 4	184 8	249 0	50 1
1961	4 881 7	1 536 6	690 7	701 9	144 0	3 345 1	1 256 3	237 0	270 6	56 4
							Sheet	Plate		
							NHT / HT	NHT / HT		
1962	5 669 8	1 858 6	768 9	848 7	241 0	3 811 3	1 361 8 / 157 3	108 9 / 82 9	297 4	79 4
1963	6 289 7	2 032 6	859 2	885 9	287 5	4 257 2	1 626 5 / 165 2	126 5 / 77 1	322 3	84 0
1964	7 063 5	2 228 6	946 5	995 1	287 0	4 834 9	1 903 0 / 167 8	124 2 / 79 0	356 7	88 4
1965	8 016 7	2 337 3	1 069 3	1 126 9	141 1	5 679 4	2 179 8 / 223 0	109 0 / 97 0	395 7	96 4
1966	8 797 6	2 340 1	987 2	1 190 4	162 6	6 457 5	2 382 4 / 281 5	125 7 / 147 2	432 2	139 2
1967	8 836 9	2 486 4	1 063 6	1 189 1	233 7	6 350 6	2 385 6 / 227 4	119 5 / 135 6	449 4	165 2
1968	9 861 8	2 694 8	1 154 2	1 284 3	256 3	7 167 0	2 910 8 / 250 2	103 5 / 140 0	508 7	105 7 / 62 1
1969	10 717 5	3 051 2	1 569 4	1 264 9	216 9	7 666 3	3 299 3 / 200 8	105 8 / 120 9	559 9	97 3 / 59 3
1970	9 952 5	2 594 5	1 307 0	1 126 0	161 5	7 358 0	3 376 4 / 126 7	94 1 / 91 4	558 7	71 4 / 49 0
1971	10 267 3	2 428 5	1 004 5	1 187 7	236 3	7 838 8	3 691 1 / 121 6	75 6 / 87 8	585 6	69 5 / 28 7
1972	11 880 0	2 633 8	1 000 7	1 467 9	165 2	9 246 2	4 431 4 / 160 6	78 8 / 97 1	673 2	95 3 / 27 5
1973	14 568 2	3 668 4	1 615 7	1 757 8	294 9	10 899 9	5 308 7 / 203 3	109 7 / 119 6	774 4	114 8 / 27 6
1974	13 639 5	3 178 4	1 503 5	1 457 4	217 4	10 461 1	5 087 9 / 216 5	157 2 / 164 6	748 2	112 8 / 25 5
1975	9 804 2	2 377 7	1 275 0	1 019 1	83 5	7 426 6	3 676 8 / 121 0	143 2 / 111 2	611 8	82 8 / 14 4
1976	12 245 6	2 540 1	1 108 5	1 227 6	203 9	9 705 6	5 167 0 / 191 9	108 4 / 106 5	772 3	83 1 / 17 1
1977	12 831 3	2 388 3	768 5	1 443 6	176 2	10 443 0	5 505 5 / 300 4	104 2 / 130 3	805 6	105 7 / 15 6
1978	14 018 4	2 672 3	923 3	1 658 7	90 3	11 346 0	5 785 4 / 350 0	116 1 / 157 1	876 6	115 7 / 20 7
1979	14 517 3	3 287 0	1 281 2	1 830 7	175 1	11 230 3	5 632 4 / 365 4	114 9 / 183 5	887 0	127 4 / 31 4
1980	14 208 7	3 723 8	1 958 3	1 582 1	183 5	10 484 9	5 301 8 / 247 3	92 2 / 220 9	830 4	107 2 / 26 0
1981	13 574 2	3 236 4	1 485 3	1 704 5	46 6	10 337 8	5 504 0 / 200 9	106 1 / 167 1	850 4	109 2 / 29 8
1982	12 117 2	3 090 3	1 508 0	1 517 3	65 1	9 026 8	4 976 9 / 150 1	70 9 / 131 2	731 2	78 9 / 25 3
1983	13 622 4	3 044 8	1 438 5	1 499 2	107 2	10 577 5	5 952 4 / 181 0	57 5 / 145 4	826 4	88 6 / 27 6
1984	14 655 4	3 579 5	1 782 6	1 768 2	28 7	11 075 9	5 866 5 / 221 2	81 5 / 173 4	852 7	114 9 / 29 3
1985	14 456 2r	3 364 7r	3 148 9r		215 9	11 091 5	5 964 3 / 220 1	74 4 / 183 4	812 8	108 3 / 40 4
1986	14 381 7	2 963 5	2 661 6		301 9	11 418 2	6 135 5 / 246 1	72 7 / 175 1	860 5	97 3 / 47 2

(1) A small amount of rolled structural shapes is included with the rod & bar in 1946-1961 and with extruded shapes in subsequent years.
(2) Through 1964 forgings and impacts were not reported. They were included in appropriate forging stock product categories, mainly rolled rod & bar instead of forgings.
(3) 1952-1958 Secondary ingot included extrusion ingot.
(4) Secondary ingot includes shipments by integrated companies, secondary smelters and imports.

Detail may not add to totals due to rounding.

Millions of Pounds

Rod & bar[1]	Extruded Shapes: Soft alloys	Extruded Shapes: Hard alloys	Tubing: Soft alloys	Tubing: Hard alloys	Wire bare: Non Conductor	Wire bare: Conductor	ACSR & bare cable	Ins. or cov. wire & cable	Powder and Paste
143.7	385.8	63.8	53.5	10.1	41.8	3.8	147.1	25.0	46.9
			Drawn tube	Welded tube					
109.9	636.6	45.8	67.2	25.5	57.7	4.0	156.9	39.5	35.7
117.8	641.0	63.5	60.2	27.6	54.4	5.5	187.4	56.1	28.4
					Wire, bare				
116.9	645.6	61.2	56.2	26.7	50.4		181.5	50.3	28.2
75.6	693.5	49.8	59.8	18.7	44.2		174.8	51.0	25.6
124.6	931.3	47.9	72.9	30.0	64.6		196.7	60.8	34.9
92.9	812.1	38.9	60.3	25.9	55.4		183.1	60.4	32.8
100.8	884.1	50.5	64.0	35.4	52.6		232.8	68.6	35.9

Extruded rod & bar: Soft	Extruded rod & bar: Hard	Extruded shapes[1]: Soft	Extruded shapes[1]: Hard	Extruded pipe & tube: Soft	Extruded pipe & tube: Hard					
136.4	54.8	12.6	782.4	44.8	139.5	5.2	78.4	40.7	55.0	253.2	76.9	43.7
121.0	61.1	10.2	870.7	54.2	150.3	6.1	65.5	52.1	57.6	272.3	89.2	44.8
							Drawn tube					
							Soft	Hard				
146.8	70.5	12.6	1,016.4	41.0	158.2	4.3	60.3	6.6	77.4	63.1	309.2	103.2	46.3
159.7	68.2	14.8	1,224.3	57.5	174.9	3.7	78.8	3.7	93.7	82.6	429.3	129.4	58.8
151.9	67.2	21.5	1,335.3	97.7	190.6	3.9	92.2	7.5	91.2	103.2	507.4	165.3	111.4
143.0	43.6	18.4	1,222.7	84.5	157.4	3.5	81.7	7.5	87.8	97.7	506.2	174.7	234.0
130.0	37.3	21.1	1,363.0	70.0	170.2	11.8	84.6	8.0	106.9	100.4	492.2	214.0	276.4
144.3	42.2	21.1	1,460.2	72.3	196.1		81.8	7.2	101.6	94.7	475.1	250.5	276.0
110.0	39.7	16.8	1,369.2	43.4	176.9		80.7	3.5	92.5	93.5	499.5	260.2	204.5
102.2	37.7	16.4	1,550.6	42.1	186.1		81.6	2.7	96.3	96.8	481.8	317.1	167.5
181.5	40.5	16.6	1,838.4	44.6	193.8		89.1	3.7	116.6	106.6	453.6	371.0	226.4
289.4	48.3	18.9	2,038.6	72.2	225.6		105.7	4.6	121.7	124.1	490.2	445.2	257.4
268.6	48.8	14.9	1,807.3	66.4	219.4		110.4		116.8	131.0	541.4	446.3	177.2
185.8	55.7	12.1	1,264.3	47.7	135.9		65.7		61.6	66.3	425.1	246.3	98.9
279.9[6]	69.9		1,661.8	28.9	188.8		98.0		94.2	79.9[6]	321.4	304.1	132.4
145.5[6]	82.5		1,845.5	65.4	183.8		104.3		114.5	85.3[6]	351.0	376.7	121.1[7]
266.5	113.7		2,021.9	93.2	176.8		106.7		110.4	89.3	390.3	419.6	135.9
300.0	100.9		1,990.1	104.2	151.9		95.9		83.5	91.3	417.4	427.5	125.6
377.6	113.0		1,791.2	107.3	140.7		80.7		96.8	72.2	399.8	363.2	116.6
272.0	102.9		1,732.9	69.9	127.3r		74.6		114.2	68.3	378.7	321.6r	107.7
190.4	74.5	19.4	1,568.1	48.2	89.5	11.4	60.9		47.9	50.8	345.2	276.0	80.0
187.1	89.2	25.4	1,859.5	55.2	122.2	14.3	65.2		56.4	54.9	357.4	333.3	78.7
201.2	91.8	31.0	2,138.8	88.0	154.1	22.6	56.4		59.9	54.3	346.0	393.8	98.7

Drawing Stock: Rod & bar rolled or extruded: Soft	Rod & bar rolled or extruded: Hard			Pipe & tube extruded or drawn: Soft	Pipe & tube extruded or drawn: Hard					
27.2	81.3	110.0	2,285.7	67.5	238.6	10.6	(8)	86.2	277.0	396.2	107.3
8.9	99.2	115.7	2,387.5	72.0	269.3		(8)	104.8	233.8	396.1	96.2

(5) Extrusion ingot includes primary and secondary metal shipments by integrated companies, non-integrated companies, secondary smelters and imports includes exports and overstated domestic shipments due to insufficient reporting of receipts.

(6) Bare wire estimated by the Aluminum Association from part year reporting.

(7) Powder, n.e.c., included for only nine months of 1976 and excluded entirely for 1977.

(8) Welded tube included with aluminum sheet.

SOURCE: U.S. Department of Commerce, Bureau of The Census, Industry and Trade Administration, Bureau of Domestic Business Development, Office of Basic Industries—Current Industrial Reports since 1960. Facts for Industry 1959 and earlier.

General Line Distributor Shipments

DISTRIBUTOR SHARE 31.0 PERCENT

During 1986 distributors captured 31.0 percent of their available market. Total U.S. shipments of Mill products, excluding direct mill uses, was 4,743 million pounds up 5.7 percent from 1985. Distributor shipments at an estimated 1,465 million pounds were up 5.5 percent from a year ago.

DESCRIPTION:

The table shows general line distributor shipments as estimated by the Management Information Committee of the National Association of Aluminum Distributors for the years 1976-1986. Also shown are estimates of the total market in which general line distributors are participants. This is labeled Total U.S. Shipments, excluding Direct Mill Uses.

For information on years prior to 1976, see the Aluminum Statistical Review—Historical Supplement.

Direct mill uses are excluded because these end product manufacturers do not buy from distributors. In some cases producers make the final products. These uses include residential siding, extruded shapes for all building products, furniture tube, conduit, irrigation pipe, can stock and exports. Total U.S. shipments excluding direct mill uses thus differ from total aluminum industry shipments of mill products by the amount of direct mill uses and products not generally handled by general line distributors (foil, conductor, forgings, powder).

General Line Distributor Shipments 1976-1986

Millions of pounds

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
Distributor Shipments											
Total	1,465	1,389r	1,411	1,285	948	1,200	1,274	1,359	1,319	1,212	1,148
Sheet	959	907	938	861	598	778	747	816	812	758	753
Plate	155	152	146	119	104	120	155	152	138	112	92
Rod, bar & wire	152	138r	134	131	106	140	161	176	161	137	116
Extruded shapes	144	138r	132	121	94	107	151	149	138	136	121
Pipe & tube	55	54	61	53	46	55	60	66	70	69	66
Total U.S. Shipments excluding Direct Mill Uses											
Total	4,743	4,487	4,591	4,120	3,170	3,835	3,832	4,327	5,095	4,442	4,158
Sheet	2,921	2,773	2,865	2,783	2,056	2,484	2,302	2,598	3,359	3,013	2,772
Plate	270	273	256	190	189	240	266	281	253	215	196
Rod, bar & wire	366	318	384	331	275	331	379	407	398	286	376
Extruded shapes	948	914	890	675	563	632	710	859	864	741	662
Pipe & tube	238	209	196	141	87	148	175	182	221	187	152
Distributor share (per cent)											
Total	30.9	31.0r	30.7	31.2	29.9	31.3	33.3	31.4	25.9	27.3	27.6
Sheet	32.8	32.7	32.7	30.9	29.1	31.3	32.5	31.4	24.2	25.2	27.2
Plate	57.4	55.7	57.0	62.6	55.0	50.0	58.3	54.1	54.5	52.1	46.9
Rod, bar & wire	41.5	43.4r	34.9	39.6	38.6	42.3	42.5	43.2	40.4	47.9	30.9
Extruded shapes	15.2	15.1r	14.8	17.9	16.7	16.9	21.3	17.4	16.0	18.4	18.3
Pipe & tube	23.1	25.8	31.1	37.6	52.9	37.2	34.3	36.3	31.7	36.9	43.4

NOTE: In this table rod, bar and wire includes extruded rod and bar; pipe and tube includes extruded, drawn and welded pipe and tube.
SOURCE: Estimated by the Management Information Committee of the National Association of Aluminum Distributors.

Shipments of Castings

SHIPMENTS DOWN 4.9 PERCENT

There were 2,119 million pounds shipped during 1986 versus the prior year's 2,228 million pounds. Of the total shipments, die castings accounted for 70 percent (69 percent in 1985), permanent mold castings, 15 percent (17 percent in 1986), sand castings, 11 percent (9 percent in 1985) and other castings, 4 percent (5 percent in 1986). Shipments for sale represented 94 percent of sand castings and 65 percent of die castings.

This table shows shipments of aluminum castings separately for sand, permanent mold and die castings, both for sale and own use through the year 1983. Permanent mold shipments for sale and own use were combined in 1984. Own use shipments are for captive consumption in the producers' end products.

Ingot requirements for the castings shipments shown in this table are part of the net ingot shipments shown on page 5 & 6.

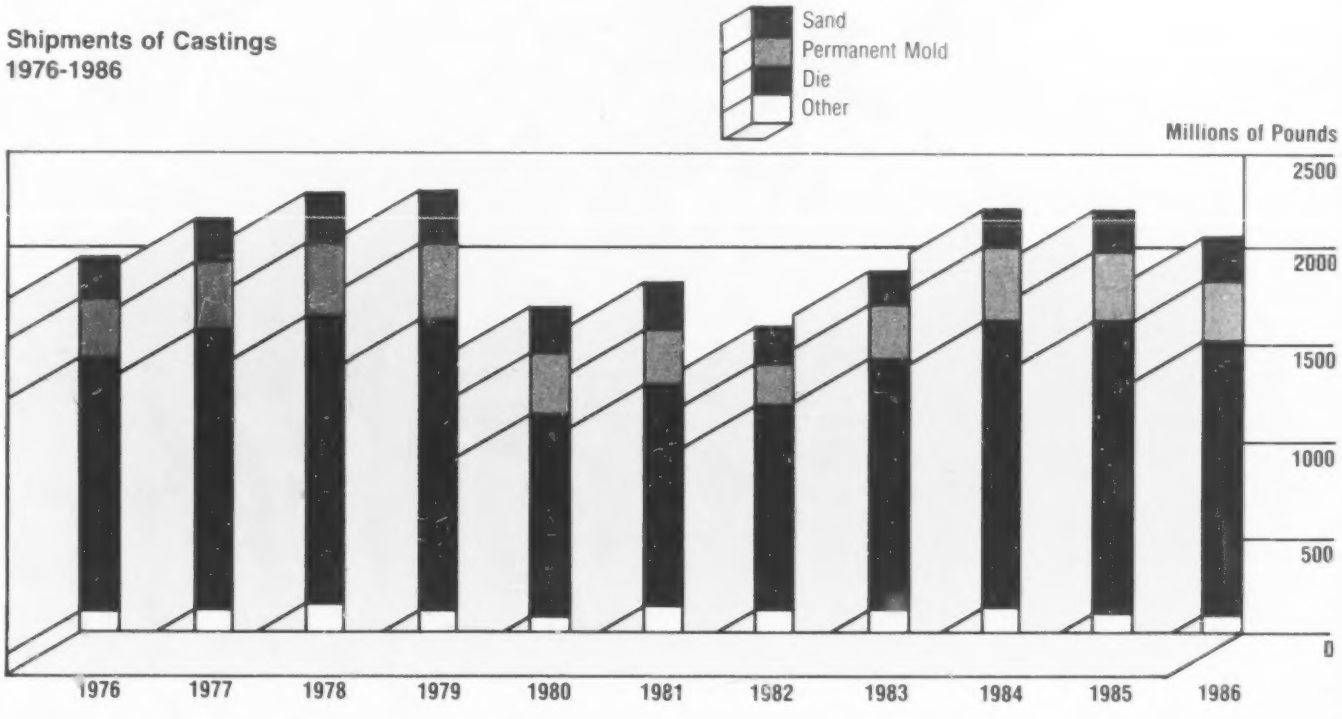
Shipments of Castings
1963-1986

Millions of Pounds

Year*	Total Castings(1)	Sand Castings		Permanent and Semi-permanent Mold Castings		Die Castings	
		for sale	own use	for sale	own use	for sale	own use
1963	1,209.3	160.1	42.1	169.6	159.3	281.2	390.4
1964	1,257.2	168.9	60.6	179.3	137.4	312.6	386.3
1965	1,416.7	193.6	72.7	185.2	134.8	391.3	431.7
1966	1,654.1	220.6	68.0	233.3	156.1	478.7	477.8
1967	1,488.7	155.3	74.1	203.6	126.8	472.2	434.7
1968	1,615.2	148.9	58.7	201.5	158.7	510.5	518.3
1969	1,731.0	155.8	59.5	245.5	160.0	510.9	573.7
1970	1,541.9	127.0	65.5	188.7	132.3	472.3	530.7
1971	1,616.8	122.7	62.4	200.2	118.3	500.5	595.4
1972	1,915.6	158.8	62.4	236.6	143.8	595.8	685.8
1973	2,113.2	184.1	65.9	247.6	147.8	680.0	735.4
1974	1,855.4	200.4	58.1	220.1	114.6	617.3	585.5
1975	1,455.2	146.5	42.9	159.7	90.7	461.4	496.1
1976	1,971.1	170.3	41.3	203.4	121.8	606.5	721.7
1977	2,153.4	186.6	33.3	228.0	145.2	682.6	763.0
1978	2,286.8	210.9	34.9	238.5	148.6	799.8	718.1
1979	2,302.8	245.5	33.2	265.4	142.2	853.1	663.6
1980	1,689.8	200.0	33.1	217.2	105.9	633.8	429.2
1981	1,819.8	207.3	30.8	209.2	82.3	704.1	452.7
1982	1,605.3	159.0	19.2	161.9	77.2	624.2	434.0
1983	1,898.1	156.3	10.2	211.8	90.5	812.9	493.3
1984	2,232.8r	183.3r	12.6r	388.7r		932.9r	583.0r
1985	2,228.4r	188.7r	15.3r	370.1r		923.5r	616.0r
1986p	2,118.8	211.3	13.8	322.5		968.2	510.3

(1) Total includes small amounts of "other" castings not shown separately *p — Preliminary*
r-Revised
SOURCE: U.S. Department of Commerce, Bureau of the Census, Industry Division
**Prior to 1963 consult the Aluminum Statistical Review—Historical Supplement*

Shipments of Castings
1976-1986



Market Shipment Highlights—1986

SHIPMENTS UP 0.4 PERCENT
Total industry shipments of aluminum in 1986 increased to level of 15,336 million pounds, up 0.4 percent from the volume of 15,273 million pounds in 1985. Total domestic shipments increased 2.5 percent while exports fell 24.3 percent.

The largest increase occurred in the area of Consumer Durables, up 12.5% from 1985.

Containers and Packaging continues as the industry's largest market in 1986 with a volume of 4,247 million pounds, or 27.7 percent of total shipments. Increased shipments for metal cans at 3,502 million pounds led this market's 3.5 percent growth over 1985. Semi-rigid food containers household and institutional foil, caps & closures, collapsible tubes and many flexible packaging uses are other important components in this market.

Building and Construction, at 3,159 million pounds, increased 4.2 percent from a 1985 volume of 3,032 million pounds. Included in this market are residential, industrial, commercial, farm and highway applications as well as mobile homes.

Shipments to the **Transportation** market increased to a volume of 3,107 million pounds, 1.9 percent more than in 1985. Included in this market are passenger cars, trucks and buses, trailers and semitrailers and recreational vehicles.

Electrical market applications showed a 2.1 percent decline to 1,386 million pound volume in 1986. Wire and cable products fell 6.6 percent.

Shipments to the **Consumer Durable** goods market experienced a 12.5 percent increase to a volume of 1,199 million pounds. Uses such as appliances, and air conditioning, showed increases.

Shipments to the nonelectrical **Machinery and Equipment** market of 848 million pounds increased 1.9 over 1985 levels and accounted for 5.5 percent of the total. Uses include agricultural, construction and industrial machinery, irrigation pipe, ladders fasteners and other general industrial equipment.

Exports of aluminum totaling 911 million pounds dropped 24.3 percent from 1985 levels and accounted for 5.9 percent of total shipments.

The **average annual growth rate*** for aluminum shipments in the 1976-1986 period was 1.5 percent.

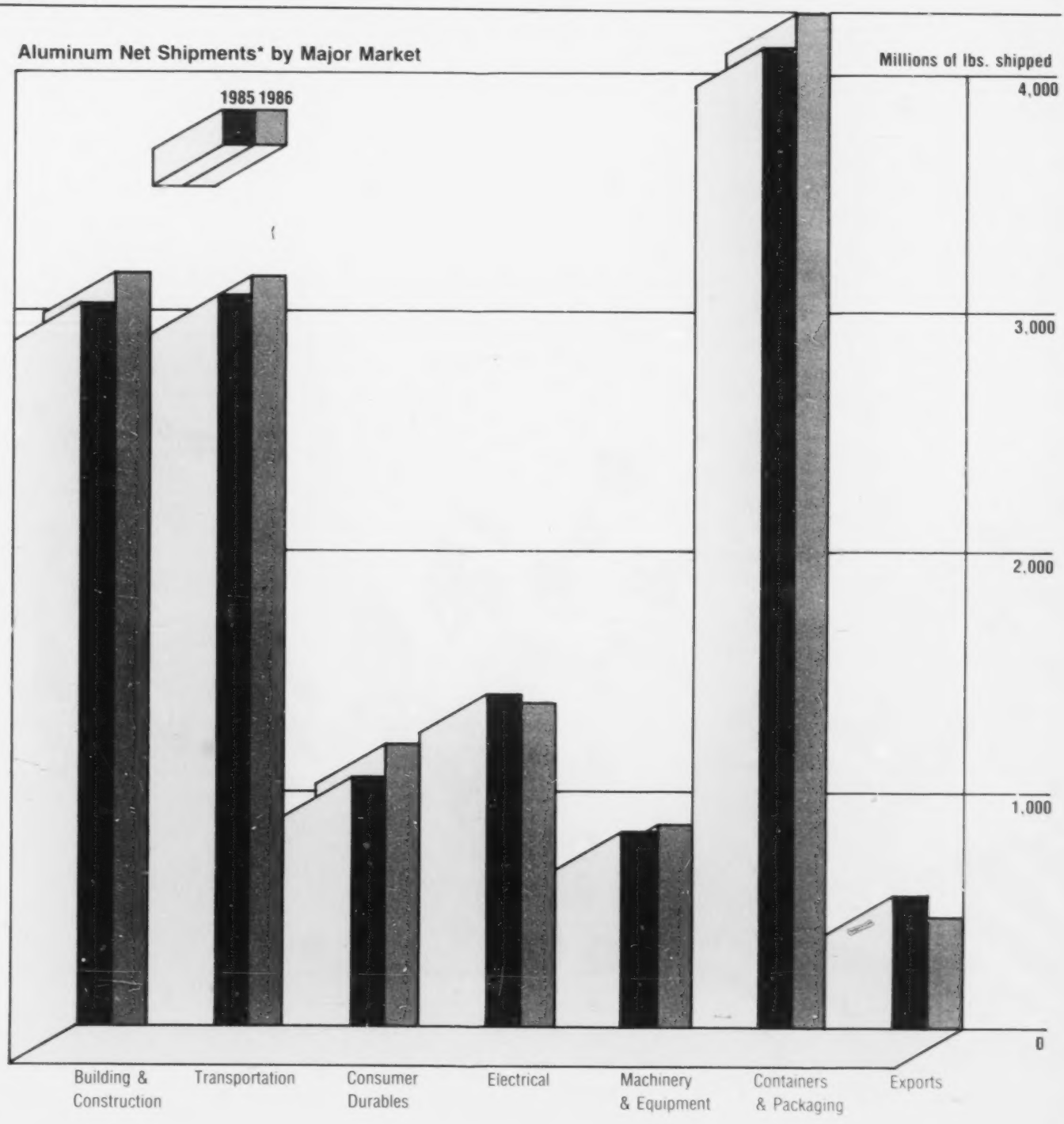
DESCRIPTION:
The Statistical and Market Research Committee of the Aluminum Association, Inc. has developed an annual breakdown of total aluminum industry shipments by major market since 1960. End use data on U.S. aluminum shipments are not available from government sources on a regular basis. Aluminum consumption figures for some industries are published by the U.S. Department of Commerce in the Census of Manufacturers. The most recent such Census covers the year 1982.

In the United States the aluminum industry has identified its major markets as building and construction, transportation, consumer durables, electrical, machinery and equipment, containers and packaging, exports and other end uses. Each of these major markets has a wide range of end uses within it.

Tables on pages 13-17 show considerable detail on the major markets for 1976-1986. Page 20 also depict trends for 1976-1986 in selected important aluminum uses.

For information on years prior to 1976 see the Aluminum Statistical Review—Historical Supplement.

(*) Annual growth rate calculated by straight line least squares method.


Aluminum Net Shipments* by Major Market
Millions of lbs. shipped
1985 1986
4,000
3,000
2,000
1,000
0
Building & Construction
Transportation
Consumer Durables
Electrical
Machinery & Equipment
Containers & Packaging
Exports

Shipments by Major Market

Major Market	1986 % Distribution	1986 Amount	1985 % Distribution	1985 Amount	1985-1985 % Change	1976-1986 % Annual Growth[a]
Building & construction	20.6	3,159	19.9	3,032r	+4.2	–
Transportation	20.3	3,107	20.0	3,049r	+1.9	+0.5
Consumer durables	7.8	1,199	7.0	1,066r	+12.5	+0.3
Electrical	9.0	1,386	9.3	1,416	−2.1	–
Machinery & equipment	5.5	848	5.4	832	+1.9	−2.0
Containers & packaging	27.7	4,247	26.9	4,105r	+3.5	+4.7
Other (inc. statistical adjustment)**	3.1	479	3.7	569r	−15.8	+4.2
Domestic, total	94.1	14,425	92.1	14,069r	+2.5	+1.5
Exports	5.9	911	7.9	1,204	−24.3	+2.3
INDUSTRY TOTAL	100.0	15,336	100.0	15,273r	+0.4	+1.5

N.A. Not applicable.

r — Revised.

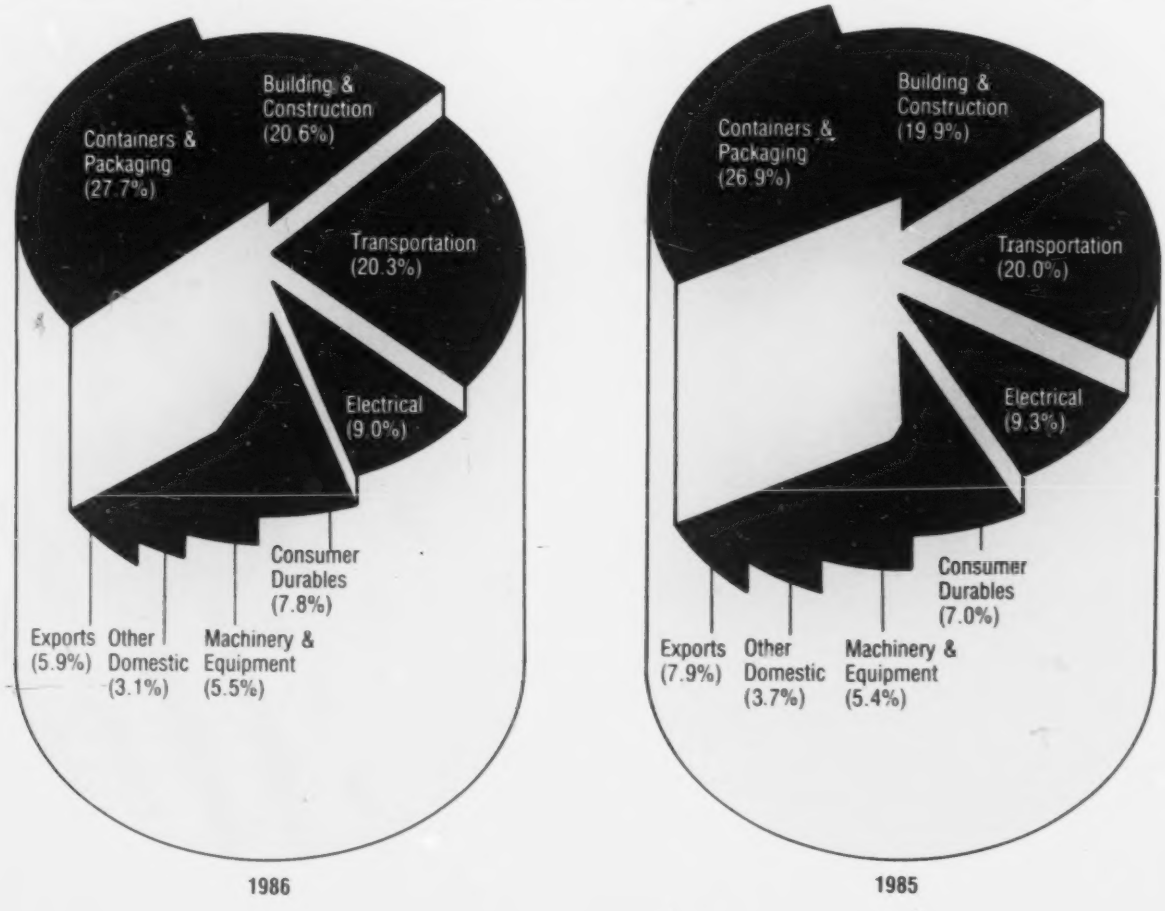
* "Net Shipments" exclude intra-industry shipments for further fabrication. It is the most accurate measure of industry output to markets because it eliminates duplication. Reported receipts of aluminum for further processing are eliminated.

** "Statistical Adjustment" accounts for net shipments of aluminum reported by the Bureau of the Census which the Aluminum Association believes were either over or understated in the amounts indicated due to excessive or insufficient reporting. It also includes otherwise unpublished Census revisions. The addition of the statistical adjustments reconciles the amounts reported by the Bureau of the Census with the net shipments that the Aluminum Association feels are more correct.

a — Annual growth rate calculated by straight line least squares method.

SOURCE: Estimated by the Statistical and Market Research Committee of the Aluminum Association, Inc.

Distribution of Aluminum Net Shipments* by Major Market



Product Net Shipments* by Major Market
1976-1986

Millions of pounds

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
Total Aluminum											
Building & construction	3,159	3,032r	2,866	2,870	2,257	2,553	2,624	3,058	3,226	3,010	2,824
Transportation	3,107	3,049r	3,083r	2,427	1,836	2,204	2,247	3,120	3,157	2,913	2,476
Consumer durables	1,199	1,066r	1,106	1,054	822	1,000	892	1,055	1,205	1,077	1,047
Electrical	1,386	1,416	1,502	1,298	1,157	1,351	1,405	1,588	1,502	1,362	1,274
Machinery & equipment	848	832	832	779	704	881	844	985	1,056	928	906
Containers & packaging	4,247	4,105r	4,031	3,918	3,568	3,512	3,334	3,223	3,141	2,780	2,585
Other	569	583	614	576	526	645	600	652	660	597	592
**Statistical adjustment	−90	−14r	+411r	−10	+340	+298	+212	+163	269	394	100
Domestic, total	14,425	14,069r	14,445	12,912	11,210	12,444	12,158	13,844	13,678	12,273	11,604
Exports	911	1,204	1,076	1,241	1,295	1,370	2,193	1,023	747	713	821
Aluminum Total	15,336	15,273r	15,521	14,153	12,505	13,814	14,351	14,867	14,425	12,986	12,425
Ingot (1)											
Building & construction	109	105	102	91	86	90	86	114	109	110	104
Transportation	1,430	1,415r	1,420r	1,172	888	1,017	960	1,349	1,311	1,260	1,149
Consumer durables	315	301	301	275	259	291	265	350	374	351	343
Electrical	202	196	196	170	165	190	176	224	213	198	188
Machinery & equipment	302	295	290	256	249	293	274	354	363	311	299
Containers & packaging	7	12	18	20	15	22	20	15	11	9	12
Other	246	255	258	248	227	313	294	343	344	312	311
**Statistical adjustment	−119	−r	+400r	−	+384	+314	+204	+119	306	367	178
Domestic, total	2,492	2,579r	2,985	2,132	2,273	2,530	2,279	2,868	2,419	2,184	2,228
Exports	472	786	594	813	817	706	1,445	419	253	204	312
Ingot Total	2,968	3,365r	3,579	3,045	3,090	3,236	3,724	3,287	2,672	2,388	2,540
Mill Products											
Building & construction	3,050	2,927r	2,764	2,779	2,171	2,463	2,538	2,944	3,117	2,900	2,720
Transportation	1,677	1,634	1,663	1,255	948	1,187	1,287	1,771	1,846	1,653	1,327
Consumer durables	884	765r	805	779	563	709	627	705	831	726	704
Electrical	1,184	1,220	1,306	1,128	992	1,161	1,229	1,364	1,289	1,164	1,086
Machinery & equipment	546	537	542	523	455	588	570	631	693	617	607
Containers & packaging	4,240	4,093r	4,013	3,898	3,553	3,490	3,314	3,208	3,130	2,771	2,573
Other	323	328	356	328	299	332	306	309	316	285	281
**Statistical adjustment	+29	−14	+11	−10	−44	−16	+8	+44	+37	−27	+78
Domestic, total	11,933	11,490	11,460	10,680	8,937	9,914	9,879	10,976	11,259	10,089	9,376
Exports	439	418	482	428	478	664	748	604	494	509	509
Mill Products Total	12,372	11,908	11,942	11,108	9,415	10,578	10,627	11,580	11,753	10,598	9,885

NOTE: Total mill products are net shipments of aluminum mill products as reported by domestic producers to the U.S. Department of Commerce, plus imported mill products, less receipts of these imports by domestic producers.

Footnotes: See page 17.

Product Net Shipments* by Major Market

Product Net Shipments* by Major Market
1976-1986

Millions of Pounds

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
Sheet											
Building & construction	1,401	1,350r	1,295	1,424	1,022	1,190	1,250	1,597	1,749	1,611	1,582
Transportation	712	676	720	567	386	499	499	824	932	865	669
Consumer durables	476	418r	411	437	295	380	333	353	424	375	387
Electrical	243	243	264	218	186	242	199	243	239	229	214
Machinery & equipment	290	288	285	285	229	282	258	267	313	265	249
Containers & packaging	3,626	3,509	3,395	3,275	2,977	2,869	2,693	2,559	2,488	2,169	1,971
Other	73	66	80	82	65	74	64	74	82	64	58
**Statistical adjustment	-23	-24	-10	-15	-15	4	11	-11	-8	-28	-50
Domestic total	6,798	6,526	6,440	6,303	5,175	5,532	5,285	5,928	6,235	5,606	5,180
Exports	337	303	373	296	296	368	375	374	265	323	322
Sheet Total[4]	7,135	6,829	6,813	6,599	5,471	5,900	5,660	6,302	6,500	5,929	5,502
Plate											
Building & construction	1	1	1	1	1	1	1	1	1	1	1
Transportation	227	238	224	155	151	179	216	220	190	160	146
Consumer durables	1	1	1	1	1	1	1	1	1	1	1
Electrical	5	4	4	4	4	16	5	10	10	7	6
Machinery & equipment	19	18	21	16	18	29	30	37	41	35	32
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	17	16	13	13	14	12	13	12	10	11	10
**Statistical adjustment	—	5	8	—	—	—	—	—	—	—	—
Domestic total	270	273	256	190	189	240	266	281	253	215	196
Exports	23	26	30	23	27	43	51	30	27	21	21
Plate Total	293	299	286	213	216	283	317	311	280	236	217
Foil											
Building & construction	48	46r	38	38	26	35	29	38	37	33	25
Transportation	52	52	49	45	29	32	31	41	45	38	25
Consumer durables	131	115	134	106	77	112	84	112	122	95	83
Electrical	11	13	20	22	19	25	23	30	27	25	23
Machinery & equipment	14	15	17	16	14	17	16	20	21	14	15
Containers & packaging	611	580r	613	613	570	614	614	640	633	597	597
Other	9	7	7	5	3	8	5	3	1	1	2
**Statistical adjustment	-23	-25	-7	—	—	—	—	—	—	—	—
Domestic total	899	853	885	845	738	843	802	884	886	803	770
Exports	13	12	12	11	13	21	38	21	12	13	14
Foil Total	912	865	897	856	751	864	840	905	898	816	784
Extruded Shapes											
Building & construction	1,506	1,432	1,334	1,233	1,045	1,163	1,176	1,215	1,235	1,163	1,019
Transportation	488	470	479	345	270	325	390	499	491	427	350
Consumer durables	183	151	134	103	79	88	96	117	133	106	94
Electrical	114	119	110	74	71	76	88	106	101	89	94
Machinery & equipment	106	106	90	75	71	80	88	108	115	88	81
Containers & packaging	—	—	1	3	—	—	—	1	—	—	—
Other	57	68	76	75	72	63	37	28	24	31	43
**Statistical adjustment	—	—	—	—	—	—	—	—	—	—	—
Domestic total	2,454	2,346	2,224	1,908	1,608	1,795	1,875	2,074	2,099	1,904	1,681
Exports	16	16	11	10	9	9	25	22	17	9	10
Extruded Shapes Total	2,470	2,362	2,235	1,918	1,617	1,804	1,900	2,096	2,116	1,913	1,691

Product Net Shipments* by Major Market 1976-1986

Millions of Pounds

	1986	1985	1985	1983	1982	1981	1980	1979	1978	1977	1976
Extruded Pipe & Tube											
Building & construction	35	37	33	25	31	23	23	31	29	31	33
Transportation	45	49	35	26	16	20	16	18	24	21	18
Consumer durables	68	56	44	31	25	22	24	21	28	22	18
Electrical	98	89	67	59	49	51	62	37	41	44	46
Machinery & equipment	38	29	15	14	16	21	26	29	35	45	53
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	11	8	7	6	3	4	4	2	2	2	3
**Statistical adjustment	-22	-22	-24	-30	-50	-27	-29	—	—	—	—
Domestic, total	273	246	177	131	90	114	126	138	159	165	171
Exports	10	10	9	9	12	14	15	15	18	20	19
Extruded Pipe & Tube Total (3)	283	256	186	140	102r	128	141	153	177	185	190
Drawn Tube											
Building & construction			3	3	2	3	3	3	3	4	3
Transportation			9	6	5	8	11	17	18	17	15
Consumer durables			17	22	21	28	28	34	40	40	41
Electrical			8	9	9	9	10	10	13	13	13
Machinery & equipment			14	17	17	19	20	21	21	20	23
Containers & packaging			—	—	—	—	—	—	1	—	—
Other			4	7	6	7	8	10	10	9	2
**Statistical adjustment			—	—	—	—	—	—	—	—	—
Domestic, total			55	64	60	74	80	95	106	103	97
Exports			1	1	1	1	1	1	1	1	1
Drawn Tube Total	(3)	(3)	56	65	61	75	81	96	107	104	98
Welded Tube											
Building & construction			1	1	1	2	2	2	3	2	2
Transportation			—	—	—	1	1	1	3	2	1
Consumer durables			38	52	45	54	36	41	58	62	53
Electrical			2	3	3	4	4	4	5	5	6
Machinery & equipment			15	14	13	46	41	44	47	69	81
Containers & packaging			—	—	—	—	—	—	—	—	—
Other			1	1	1	3	2	2	2	2	1
**Statistical adjustment			+3	-15	-15	-4	-11	11	8	28	50
Domestic, total			60	56	48	114	97	83	110	114	94
Exports			—	—	—	—	—	—		—	—
Welded Tube Total	(4)	(4)	60	56	48	114	97	83	110	114	94
Rod & Bar (2)											
Building & construction	13	22	27	25	23	25	29	29	33	28	29
Transportation	46	41	45	40	29	31	35	40	44	35	34
Consumer durables	14	13	15	17	11	13	15	15	16	14	14
Electrical	70	71	85	72	66	92	97	93	85	67	73
Machinery & equipment	51	52	53	54	46	52	51	53	52	41	39
Containers & packaging	—	—	—	—	—	—	1	1	—	—	—
Other	30	21	29	21	24	20	26	26	31	27	25
**Statistical adjustment	-30	—	+55	-49	-34	-51	-109	-84	-68	—	-97
Domestic, total	254	220	309	278	233	284	363	341	329	212	311
Exports	21	23	22	24	52	103	137	62	60	28	55
Rod & Bar Total	275	243	331	302	285	387	500	403	389	240	366

Footnotes: See page 17

Product Net Shipments* by Major Market

Product Net Shipments* by Major Market 1976-1986

Millions of pounds

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
Bare Wire											
Building & construction	46	39	31	28	19	20	24	27	26	26	25
Transportation	12	12	9	4	4	4	5	8	8	8	6
Consumer durables	6	6	5	5	4	5	5	6	6	8	10
Electrical	7	7	9	8	8	9	11	11	10	11	10
Machinery & equipment	12	14	15	16	16	22	21	28	29	24	22
Containers & packaging	3	4	4	7	6	7	6	7	8	5	5
Other	5	4	2	2	3	3	4	6	4	4	3
**Statistical adjustment	- 21	- 12	—	19	18	23	60	25	22	12	16
Domestic, total	112	98	75	51	42	47	16	68	69	74	65
Exports	7	9	6	10	12	25	58	30	24	15	19
Bare Wire Total	119	107	81	61	54	72	74	98	93	89	84
ACSR & Bare Cable											
Building & construction	—	—	—	—	—	—	—	—	—	—	—
Transportation	—	—	—	—	—	—	—	—	—	—	—
Consumer durables	—	—	—	—	—	—	—	—	—	—	—
Electrical	238	277	341	324	299	311	367	387	335	295	294
Machinery & equipment	—	—	—	—	—	—	—	—	—	—	—
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	—	—	—	—	—	—	—	—	—	—	—
**Statistical adjustment	—	—	—	—	—	—	+ 8	—	—	—	—
Domestic, total	238	277	341	324	299	311	375	387	335	295	294
Exports	1	5	5	35	46	68	25	31	55	57	28
ACSR & Bare Cable Total	239	282	346	359	345	379	400	418	390	352	322
Insulated or Covered Wire & Cable											
Building & construction	—	—	—	—	—	—	—	—	—	—	—
Transportation	—	—	—	—	—	—	—	—	—	—	—
Consumer durables	—	—	—	—	—	—	—	—	—	—	—
Electrical	396	395	393	332	275	320	359	428	419	376	304
Machinery & equipment	—	—	—	—	—	—	—	—	—	—	—
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	—	—	—	—	—	—	—	—	—	—	—
**Statistical adjustment	—	—	—	—	—	—	—	—	—	—	—
Domestic, total	396	395	393	332	275	320	359	428	419	376	304
Exports	—	1	1	1	1	2	4	—	1	1	—
Insulated Wire & Cable Total	396	396	394r	333	276	322	363	428	420	377	304
Forgings											
Building & construction	—	—	1	1	1	1	1	1	1	1	1
Transportation	87	89	87	62	53	82	79	98	85	76	57
Consumer durables	1	1	1	1	1	2	2	2	2	2	2
Electrical	—	—	1	1	1	1	1	1	1	1	1
Machinery & equipment	9	9	9	8	8	10	10	13	13	11	7
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	15	17	12	13	12	10	11	8	9	9	12
**Stastical adjustment	20	15	—	—	—	—	—	—	5	—	—
Domestic, total	92	101	111	86	76	106	104	123	116	100	80
Exports	5	7	4	3	3	3	3	4	—	6	3
Forgings Total	97	108	115	89	79	109	107	127	116	106	83

Product Net Shipments* by Major Market
1976-1986

Millions of pounds

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
Impacts											
Building & construction	—	—	—	—	—	—	—	—	—	—	—
Transportation	8	7	6	5	5	6	4	5	6	4	6
Consumer durables	4	4	5	4	4	4	3	3	1	1	1
Electrical	2	2	2	2	2	3	3	4	3	2	2
Machinery & equipment	7	6	8	8	7	10	9	11	6	5	5
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	6	6	8	9	7	7	7	8	5	3	3
**Statistical adjustment	+ 20	+ 15	—	—	—	—	—	—	—	—	—
Domestic, total	47	40	29	28	25	30	26	31	21	15	17
Exports	—	—	—	—	—	—	—	—	—	—	—
Impacts Total	47	40	29	28	25	30	26	31	21	15	17
Powder & Paste											
Building & construction	—	—	—	—	—	—	—	—	—	—	—
Transportation	—	—	—	—	—	—	—	—	—	—	—
Consumer durables	—	—	—	—	—	—	—	—	—	—	—
Electrical	—	—	—	—	—	—	—	—	—	—	—
Machinery & equipment	—	—	—	—	—	—	—	—	—	—	—
Containers & packaging	—	—	—	—	—	—	—	—	—	—	—
Other	100	115	117	94	89	121	125	130	136	122	119
**Statistical adjustment	—	—	− 12	10	10	17	20	15	14	15	3
Domestic, total	100	115	105	84	79	104	105	115	122	107	116
Exports	6	6	8	5	6	7	16	14	14	15	17
Powder & Paste Total	106	121	113	89	85	111	121	129	136	122	133

* *Net Shipments* exclude intra-industry shipments for further fabrication. It is the most accurate measure of industry output to markets because it eliminates duplication. Reported receipts of aluminum for further processing are eliminated.

** "Statistical Adjustment" accounts for net shipments of aluminum reported by the Bureau of the Census which the Aluminum Association believes were either over or understated in the amounts indicated due to excessive or insufficient reporting. It also includes otherwise unpublished Census revisions. The addition of the statistical adjustments reconciles the amounts reported by the Bureau of the Census with the net-shipments that the Aluminum Association feels are more correct.

r — Revised (NR) not reported by Census.

(1) Includes primary and secondary ingot for castings, destructive uses and exports.
(2) Extruded rod & bar combined with rolled and continuous cast rod & bar from 1972 to present.
(3) Drawn tube combined with extruded pipe and tube.
(4) Welded tube combined with sheet.

SOURCE: Estimated by the Statistical and Market Research Committee of the Aluminum Association, Inc.

Trends in Selected Markets

Trends in Selected Markets*
1976-1986

BUILDING & CONSTRUCTION

Millions of Pounds

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
Windows, doors & screens, total	1,136	1,080	987	949	748	845	851	903	957	916	817
Ingot	40	37	37	33	30	34	36	46	41	43	54
Total mill products	1,096	1,043	950	916	718	811	815	857	916	873	763
Sheet	167	168	152	154	108	131	118	130	157	114	117
Plate	1	1	1	1	1	1	1	1	1	1	1
Extruded shapes	902	845	766	733	585	651	665	695	725	727	618
Rod & Bar[1]	—	9	15	14	11	14	15	15	16	15	14
Bare wire	25	20	16	14	13	14	15	16	17	16	13
Awnings & Canopies, total	129	132	147	152	105	114	143	156r	177	145	137
Ingot	—	—	—	—	—	—	—	—	—	—	—
Total mill products	129	132	147	152	105	114	143	156	177	145	137
Sheet	109	111	122	130	86	93	121	131	150	122	117
Extruded shapes	18	19	22	19	16	18	19	21	23	19	16
Extruded pipe & tube[2]	2	2	1	1	1	1	1	2	2	2	2
Drawn tube[3]	—	—	1	1	1	1	1	1	1	1	1
Welded tube[4]	—	—	1	1	1	1	1	1	1	1	1
Residential siding, total	376	373	325	381	262	324	376	488	494	509	521
Sheet	375	372	324	380	261	323	375	487	493	508	519
Extruded shapes	1	1	1	1	1	1	1	1	1	1	2
Mobile homes, total	185	193	183	217	161	174	156	209	268	275	265
Ingot	6	5	5	5	4	4	3	5	5	5	5
Total mill products	179	188	178	212	157	170	153	204	263	270	260
Sheet	103	114	111	140	106	115	102	144	192	196	197
Extruded shapes	76	74	67	72	51	55	51	60	71	74	63
Bridge, street & highway, total	138	131	112	112	95	93	101	128	125	123	121
Ingot	16	16	16	14	13	12	12	16	15	16	16
Total mill products	122	115	96	98	82	81	89	112	110	107	105
Sheet	72	65	52	61	47	48	52	66	68	63	61
Foil	1	1	1	1	1	1	1	1	1	—	—
Extruded shapes	23	22	20	19	15	16	18	22	20	20	20
Pipe & tube[2]	24	25	22	16	18	15	17	22	20	23	23
Rod & bar[1]	2	2	1	1	1	1	1	1	1	1	1

Trends in Selected Markets*
1976-1986

TRANSPORTATION

Millions of pounds

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
Trucks & buses, total	449	419	466	357	273	310	287	497	449	433	366
Ingot	213	200	212	183	151	148	136	216	199	191	169
Total mill products	236	219	254	174	122	162	151	281	250	242	197
Sheet	128	123	151	96	68	85	77	158	137	137	114
Plate	5	5	4	4	3	4	4	8	7	7	7
Foil	1	1	1	—	—	—	—	—	—	—	—
Rod & bar[1]	1	1	1	2	2	2	2	5	5	3	2
Extruded shapes	65	55	60	49	32	45	44	69	64	63	52
Extruded pipe & tube[3]	2	2	1	1	1	1	1	1	1	—	—
Drawn tube[3]	—	—	1	1	1	1	1	1	1	1	1
Bare wire	—	—	—	—	—	—	—	1	1	1	—
Forgings	33	31	34	20	14	23	21	37	33	29	20
Impacts	1	1	1	1	1	1	1	1	1	1	1
Passenger cars, total[2]	1,545	1,547	1,542r	1,279	911	1,105	1,046	1,501	1,571	1,494	1,272
Ingot	1,101	1,109r	1,108r	917	662	781	746	1,008	1,003	967	886
Total mill products	444	438	434	362	249	324	300	493	568	527	386
Sheet	286	274	284	235	156	199	180	333	392	378	264
Plate	1	1	1	1	1	1	1	1	2	—	1
Foil	47	46	43	40	26	28	24	36	41	35	22
Rod & bar[1]	22	20	18	19	9	9	10	11	11	11	12
Extruded shapes	46	53	43	34	37	59	61	73	77	58	51
Extruded pipe & tube[3]	26	27	22	18	9	13	9	10	14	14	11
Drawn tube[3]	—	—	5	3	1	4	7	12	13	13	10
Bare wire	3	3	4	1	1	1	1	1	1	1	1
Forgings	11	12	12	10	8	8	6	14	14	14	9
Impacts	2	2	2	1	1	2	1	2	3	3	5
Trailers & semi-trailers, total	393	386	425	301	174	211	243	388	425	366	280
Ingot	33	30	31	20	17	20	21	33	33	30	22
Total mill products	360	356	394	281	157	191	222	355	392	336	258
Sheet	143	140	158	124	62	78	88	143	165	141	104
Plate	10	11	9	7	4	7	9	14	15	11	10
Rod & bar[1]	1	1	1	1	1	1	1	2	2	2	2
Extruded shapes	203	201	222	147	86	103	122	194	208	179	140
Pipe & tube[3]	2	2	2	1	1	1	1	1	1	1	1
Bare wire	1	1	2	1	1	1	1	1	1	2	1
Forgings	—	—	—	—	—	—	—	—	—	—	—

Footnotes: See page 20.

Trends in Selected Markets

Trends in Selected Markets*
1976-1986

CONSUMER DURABLES — Millions of pounds

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
Air conditioners, freezers, refrigerators, total	375	315	337	275	219	290	249	304	357	301	285
Ingot	36	33	32	30	25	33	29	38	39	35	32
Total mill products	339	282	305	245	194	257	220	266	318	266	253
Sheet	134	118	125	108	95	117	106	116	138	127	134
Foil	129	113	132	104	75	109	81	108	117	91	81
Rod & Bar	1	1	—	—	—	—	—	—	—	—	—
Extruded shapes	31	17	15	13	12	13	13	19	31	22	17
Extruded pipe & tube[3]	44	33r	30	16	11	14	12	13	13	13	11
Drawn tube[4]	—	—	2	2	1	4	8	10	14	13	10
Portable appliances, total	49	47	53	55	44	59	56	70	76	58	58
Ingot	30	28	31	30	26	31	30	41	43	37	35
Total mill products	19	19	22	25	18	28	26	29	33	21	23
Sheet	17	16	18	21	14	23	22	24	27	16	18
Extruded shapes	1	2	2	2	3	3	2	2	2	2	2
Pipe & Tube[3]	1	1	1	1	1	1	1	2	3	3	3
Rod & bar[3]	—	—	1	1	—	1	1	1	1	—	—
Cooking utensils, total	151	150	175	206	136	171	161	152	171	138	163
Ingot	26	25	26	23	21	26	24	27	28	25	26
Total mill products	125	125	149	183	115	145	137	125	143	113	126
Sheet	122	121	144	177	109	140	132	121	139	109	122
Extruded shapes	2	3	4	4	4	4	4	3	3	3	3
Bare wire	1	1	1	1	1	1	1	1	1	1	1
CONTAINERS & PACKAGING											
Household & institutional foil, total	270	267	270	283	270	287	283	290	257	259	245
Metal cans total mil products	3,502	3,381	3,251	3,140	2,858	2,725	2,583	2,445	2,349	2,051	1,851
Sheet	3,502	3,381	3,251	3,140	2,858	2,725	2,583	2,445	2,349	2,051	1,851
Semi-rigid food containers Total mill products	167	157r	173	158	134	153	160	159	176	168	166
Sheet	27	25	33	21	19	38	20	22	23	15	15
Foil	140	132r	140	137	115	115	140	137	153	153	151

r — revised

* These "selected markets" represent either those in which The Aluminum Association has marketing programs, or which are important aluminum market categories. They only account for a portion of aluminum shipments to each major market.

(3) Extruded rod/rod bar combined with rolled and continuous cast and rod bar.

(2) Shipments to "Passenger Cars" cover new domestic automobile production, spare parts, accessories and after market parts. Shipments for light trucks and vans are included in Trucks and Buses.

(3) Drawn tube combined with extruded pipe & tube.

(4) Welded tube combined with sheet.

NOTE: For information on years prior to 1975, see the Aluminum Statistical Review - Historical Supplement.

SOURCE: Estimated by the Statistics Task Group Committee of the Aluminum Association, Inc.

U.S. Aluminum Supply

The U.S. aluminum supply increased 27,000 metric tons in 1986 to a total of 6,621,000 metric tons. This represents a 0.4 percent rise compared to the 1985 supply level. Primary production at 3,038,653 metric tons was down 13.2 percent from the 1985 production of 3,499,700 metric tons.

Primary imports of 1,348,831 metric tons were 55.3 percent more than the 1985 level of 868,683 metric tons. Imports of mill products increased 6.7 percent to 493,913 metric tons during 1986 as compared to 462,973 metric tons in 1985.

Import data for both years reflect the reimports of metal exported for processing and returned to further processing in accordance with tariff arrangements under TSUSA 806.30 (Tariff Schedules of the United States Annotated).

Secondary recovery (domestic and imports) was 1,739,000 metric tons. The graph on page 22 illustrates the relative change in the portions of total aluminum supplies from each source for the years 1976 through 1986.

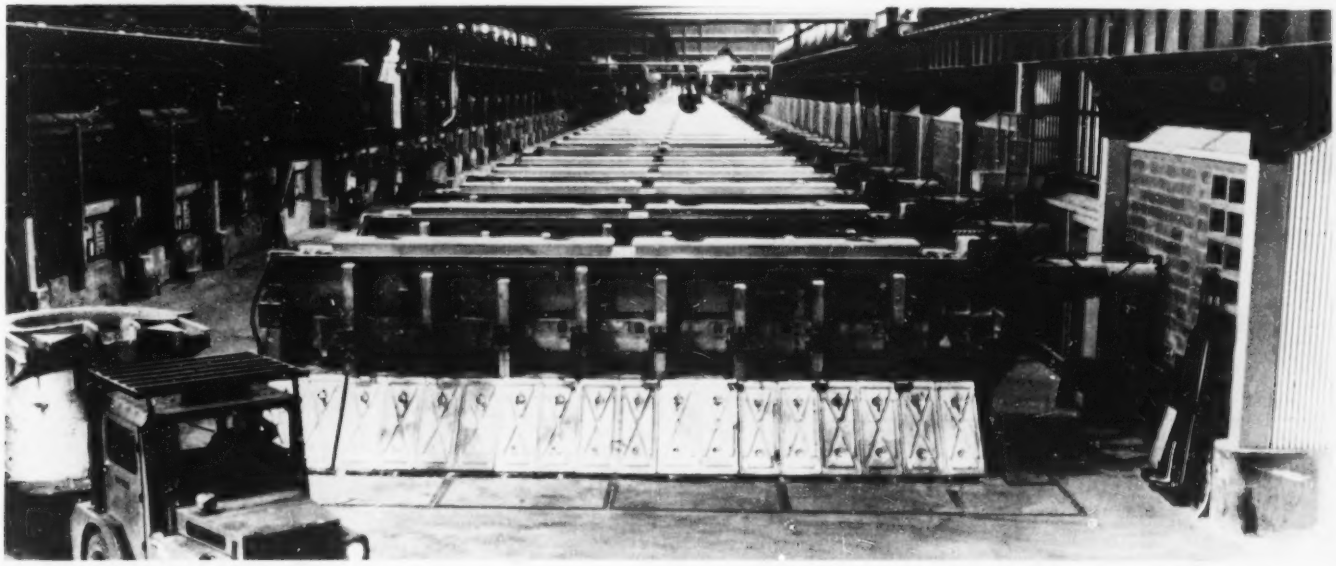
The table on page 23 details the total supply of aluminum and its principal sources for the years 1942 through 1986 before any adjustments for stockpile deliveries or withdrawals. The significance of the stockpile and its effect on total supply are described on page 24.

The growth of U.S. primary aluminum production over the past decade is outlined on the graph and detailed in the table on page 25.

Installed capacity by company is presented for the years 1976 through 1986 on page 26. The 1986 year-end primary aluminum capacity in the U.S. was 3,844,100 metric tons, down 11.5% from 1985.

Aluminum recovery from scrap is an important contributor to the total aluminum supply. Data showing the increase in this source of supply for the years 1946 through 1986 are presented on pages 30 and 31.

This "state of the art" primary aluminum potroom incorporates the latest energy saving technology. Prior to World War II producing one pound of aluminum required 12 kilowatt hours of electricity. Today the figure for newer reduction plants is about half of that.



Total Supply

1986 SUPPLY UP 0.4 PERCENT

Total supply increased 0.4 percent to 6,621,000 metric tons in 1986.

Changes vs. 1985

Primary production	−13.2%
Imports, Primary	+55.2%
Imports, Mill Products	+6.7%
Secondary Recovery	−1.3

Since 1976 the total supply has expanded at an average rate of 0.6 percent a year. In 1986 primary production represented 46 percent of total supply; imports accounted for 28 percent; and secondary recovery represented 26 percent.

In the ten years 1976-1986, secondary recovery grew at a 2.4 percent annual rate, while primary reduction decreased at a 0.6 percent annual rate.

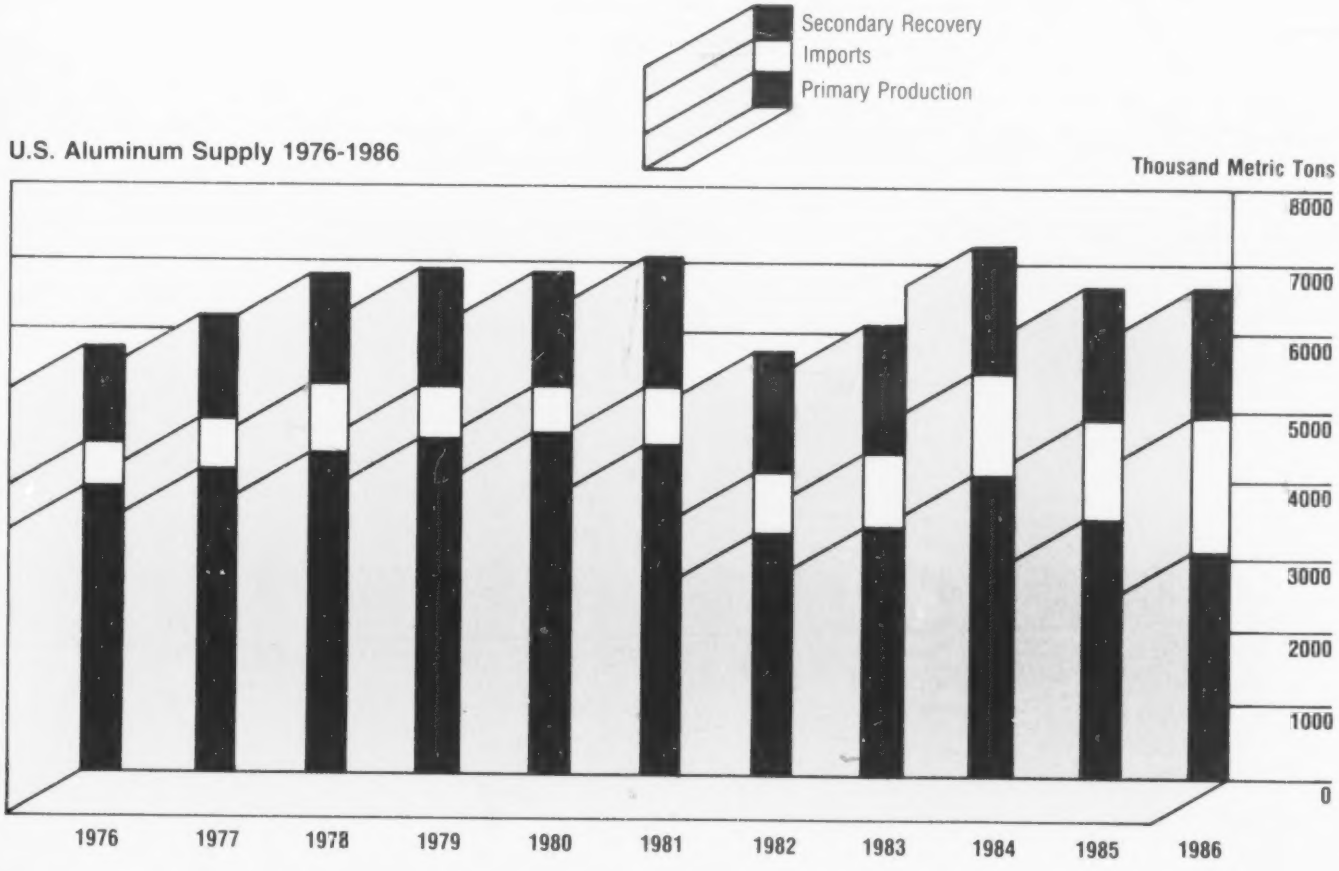
DESCRIPTION

United States supply of aluminum consists of domestic primary production, imports of primary and mill products, and metal recovered from scrap. No adjustment is made in this presentation for shipments to or withdrawals from the government stockpile. This is shown on page 24.

Detailed data on United States supply of aluminum from 1942 to 1986 are shown in the table on page 23.

For a picture of domestic primary production, see page 25. For the relationship of domestic primary production to world production, see pages 44-45. For a breakdown of imports, see pages 38-39. For further information on secondary recovery, see pages 30 and 31.

U.S. Aluminum Supply 1976-1986



Total Supply
1942-1986

Thousands of Metric Tons

Year	Total Supply	Domestic Primary Production	Imports			Secondary Recovery		
			Total	Primary[1]	Mill Products[3]	Total	Domestic[2]	Imported Scrap[1][2]
1942	753	473	102	97	5	178	178	(*)
1943	1,242	835	123	123	(*)	285	285	(*)
1944	1,093	704	92	91	(*)	297	295	1
1945	1,029	449	305	302	3	275	271	4
1946	674	371	39	38	1	264	252	12
1947	859	519	14	14	(*)	326	313	13
1948	965	566	81	75	5	319	260	59
1949	822	547	78	70	7	197	164	33
1950	1,099	652	171	161	10	276	221	55
1951	1,171	759	130	111	19	282	265	16
1952	1,264	850	131	116	15	282	276	6
1953	1,795	1,136	303	273	30	356	334	22
1954	1,830	1,325	214	201	13	291	284	7
1955	2,014	1,420	200	179	21	393	376	18
1956	2,153	1,523	232	210	22	398	388	10
1957	2,133	1,495	224	205	20	415	404	11
1958	2,009	1,420	259	232	28	329	321	8
1959	2,457	1,773	268	218	50	416	407	9
1960	2,406	1,828	178	140	38	401	397	4
1961	2,402	1,727	230	181	49	445	440	5
1962	2,796	1,921	341	282	59	533	528	5
1963	3,118	2,098	419	377	42	601	593	8
1964	3,372	2,316	409	357	51	648	641	7
1965	3,817	2,499	543	479	65	774	752	22
1966	4,116	2,693	591	475	116	833	805	28
1967	4,254	2,966	466	408	59	821	797	25
1968	4,572	2,953	684	622	62	935	904	31
1969	4,991	3,441	484	425	59	1,067	1,043	24
1970	4,950	3,607	406	318	88	937	907	30
1971	5,146	3,561	582	503	78	1,004	953	51
1972	5,445	3,740	684	598	86	1,022	1,022	(2)
1973	5,759	4,109	523	461	63	1,127	1,127	(2)
1974	6,123	4,448	511	461	50	1,163	1,163	(2)
1975	5,093	3,519	453	394	59	1,121	1,121	(2)
1976	5,799	3,857	608	522	86	1,334	1,334	(2)
1977	6,256	4,117	683	608	75	1,456	1,456	(2)
1978	6,783	4,358	907	688	220	1,518	1,518	(2)
1979	6,880	4,557	711	518	193	1,612	1,612	(2)
1980	6,833	4,653	603	527	76	1,577	1,577	(2)
1981	7,061	4,489	782	645	138	1,790	1,790	(2)
1982	5,762	3,274	823	616	207	1,666	1,666	(2)
1983	6,149	3,353	1,023	743	281	1,773	1,773	(2)
1984	7,235	4,099	1,376	882	494	1,760	1,760	(2)
1985	6,594	3,500	1,332	869	463	1,762	1,762	(2)
1986	6,621	3,039	1,843	1,349	1,494	1,739	1,739	(2)

r — Revised *Detail may not add due to rounding*

p — Preliminary

(a) Less than 0.5 thousands of metric tons

CONVERSION FACTOR: One metric ton = 2,204.6 pounds

(1) Some imports of "starter" metal, classified by the Bureau of The Census in 1954-1957 as scarp, have here been classified as primary metal, as estimated by the Department of Commerce.

(2) Domestic secondary data are recoverable metal content for estimated total scrap consumption, as estimated by the Bureau of Mines. Before 1972 total supply included both domestic secondary recovery and an estimated 90 percent recovery from reported scrap imports. Beginning in 1972 the Bureau of Mines required reporting of imported scrap recovery data and these data are included in the domestic secondary figures beginning with that year.

(3) Starting in 1970, includes reimports of metal exported for processing and returned for further processing. (TSUSA 806.30)

SOURCE: U.S. Department of Commerce, Bureau of the Census, Department of Interior, and Bureau of Mines.

U.S. Suppliers' Inventories

INVENTORIES DOWN 4.6 PERCENT

The Bureau of the Census began reporting U.S. Suppliers' aluminum inventory in 1968. The figures include all forms of scrap, ingot, metal in process and finished products. During 1986 inventories decreased by 237 million pounds to year-end inventory of 4,928 million pounds.

U.S. Suppliers' Inventories 1976-1986

Millions of pounds at end of year

	Type of Supplier			
Year*	Total	Integrated	Non Integrated	Secondary Smelter
1976	5,701	4,781	687	234
1977	5,706	4,778	687	241
1978	5,494	4,460	776	258
1979	5,125	4,124	768	233
1980	5,076	4,018	797	261
1981	6,607	5,524	798	266
1982	6,199	5,224	759	216
1983	4,994	3,979	853	163
1984	5,850	4,692	929	229
	Total	Ingot	Scrap	Other
1985	5,165r	2,235r	567r	2,364r
1986	4,928	1,973	630	2,324

Detail may not add due to rounding.

**Prior to 1976 consult the Aluminum Statistical Review — Historical Supplement.*

SOURCE: U.S. Department of Commerce, Bureau of the Census Current Industrial Report M33-2.

The United States Government's aluminum stockpile, following World War II, was formed to provide the nation with a supply of aluminum for mobilization purposes. Since 1963, as a result of an agreement between major domestic aluminum producers, other interested aluminum enterprises and the U.S. Government, a program of orderly disposal of the stockpile ensued. By the end of 1976, the stockpile was essentially depleted. The data in the table represent the best figures available from different sources. Total supply, unadjusted for stockpile changes is on page 23.

Total Supply Adjusted for Stockpile 1976-1986

Millions of pounds

Year*	Total supply adjusted for stockpile	Total supply, all sources	Shipments from stockpile	Shipments to stockpile
1976	12,803	12,785	18	—
1977	13,792	13,792	—	—
1978	14,954	14,954	—	—
1979	15,168	15,168	—	—
1980	15,064	15,064	—	—
1981	15,567	15,567	—	—
1982	12,703	12,703	—	—
1983	13,558	13,558	—	—
1984	15,951	15,951	—	—
1985	14,537	14,537	—	—
1986	14,596	14,596	—	—

**Prior to 1976 consult the Aluminum Statistical Review— Historical Supplement.*

SOURCES: General Services Administration; U.S. Department of Commerce; Industry Sources.

Production of Primary Aluminum

PRODUCTION DOWN 13.2 PERCENT

Primary aluminum production totaled 3,038,653 metric tons in 1986 vs. the production of 3,499,700 metric tons in 1985. In the decade 1976-1986 the average annual rate of change was −2.6 percent.

DESCRIPTION:

In the United States, primary production of aluminum was begun in 1888 by the Pittsburgh Reduction Company. Data on aluminum production started in 1893, covering the industry from its very early period.

Data for 1976-1986 are presented here for your review. Data prior to 1976 may be obtained from the Aluminum Statistical Review—Historical Supplement.

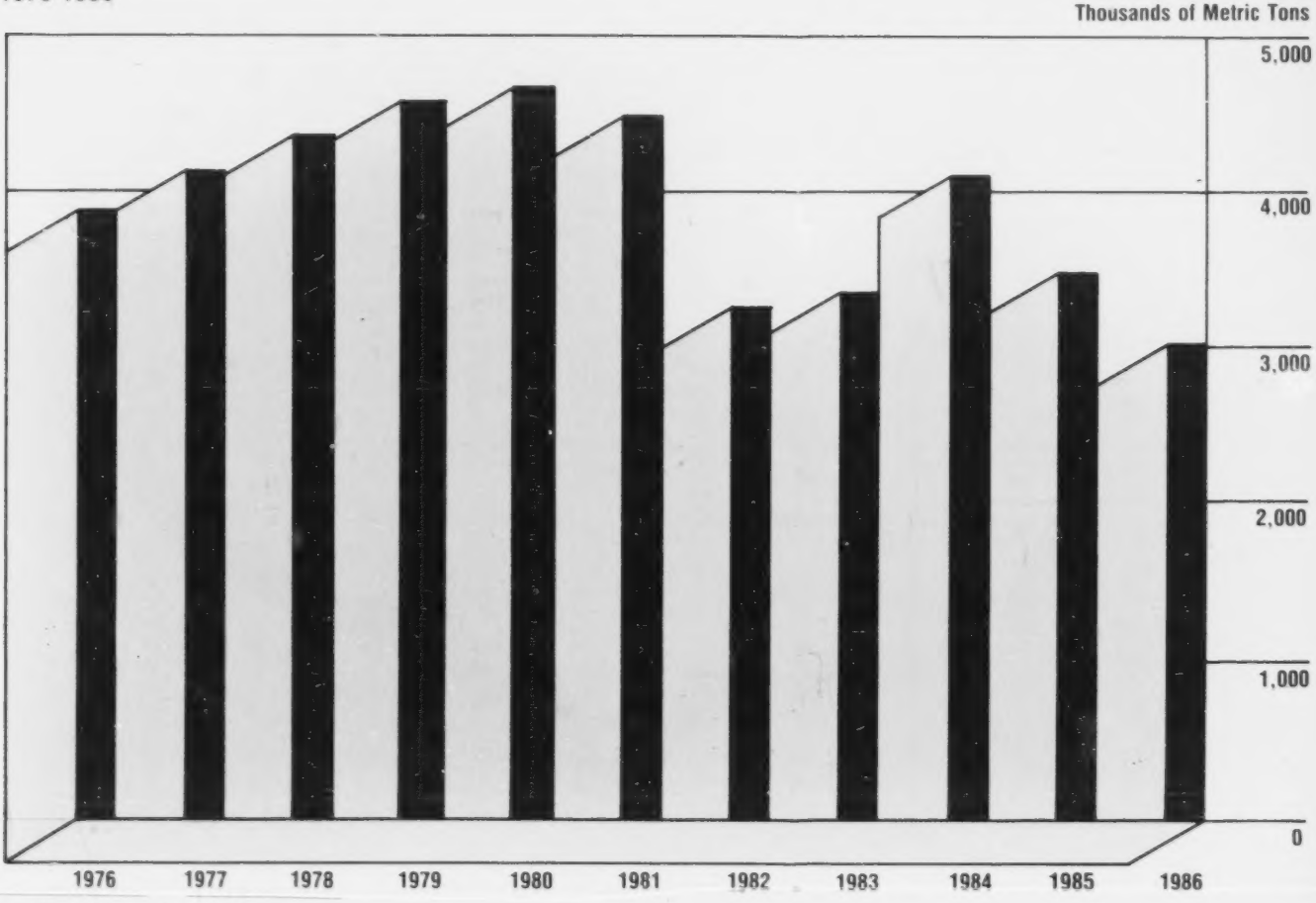
Production of Primary Aluminum in U.S.A. 1976-1986

Year*	Thousands of Metric Tons
1976	3,856.8
1977	4,117.5
1978	4,358.0
1979	4,556.9
1980	4,653.6
1981	4,488.7
1982	3,273.7
1983	3,353.3
1984	4,099.1
1985	3,499.7
1986	3,038.7

** Prior to 1976 consult the Aluminum Statistical Review—Historical Supplement*

SOURCES: The Aluminum Association, Inc.
CONVERSION FACTOR:
One metric ton = 2,204.6 pounds

U.S. Primary Aluminum Production 1976-1986



SOURCE: the Aluminum Association

U.S. Primary Aluminum Capacity

CAPACITY DOWN 11.5 PERCENT
Total annual primary aluminum installed capacity as of December 31, 1986 was 3,844,100 metric tons.

The percentage distribution of U.S. primary capacity by company at year-end 1986 was: Alcoa, 28.5%; Alumax, 15.6%; Kaiser, 13.7%; Reynolds, 11.0%; Ormet, 6.4%; Noranda, 5.3%; Commonwealth, 4.4%; Alcan, 4.2%; Columbia Falls, 4.2%; National Aluminum, 2.5%; Northwest Aluminum, 2.1%; Southwire, 2.1%.

DESCRIPTION:

There were twelve domestic primary producer companies as of December 31, 1986. They were Alcan Aluminum Corp., Aluminum Company of America, Alumax, Inc., Columbia Falls Aluminum, Commonwealth Aluminum Corp., Kaiser Aluminum & Chemical Corporation, National Aluminum Company (54.5% interest in National-Southwire), Noranda Aluminum Incorporated, Northwest Aluminum, Ormet Corp., Reynolds Metals Company and Southwire Company (45.5% interest in National-Southwire).

U.S. Primary Aluminum Capacity[1]
1976-1986

Thousands of Metric Tons

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
Alcoa	1095.0	1430.0	1429.7	1429.7	1429.7	1564.9	1564.9	1542.2	1542.2	1519.6	1519.6
Alumax[3]	600.0	599.0	595.1	595.1	385.6	377.1	377.1	198.4	198.4	198.4	198.4
Kaiser	526.2	526.2	526.2	656.8	656.8	656.8	656.8	656.8	656.8	656.8	656.8
Reynolds	422.8	422.8	781.1	884.5	884.5	884.5	884.5	884.5	884.5	884.5	884.5
ARCO Aluminum[2][5]	-	-	326.6	326.6	326.6	326.6	326.6	326.6	272.2	272.2	272.2
Ormet Corp.[6]	244.9	-	-	-	-	-	-	-	-	-	-
Consolidated	-	227.2	292.3	294.1	326.8	319.3	319.3	319.3	319.3	319.3	319.3
Howmet[3]	-	-	-	-	207.0	198.4	198.4	198.4	198.4	198.4	198.4
Noranda	204.1	204.1	204.1	204.1	204.1	127.0	127.0	127.0	127.0	127.0	127.0
Revere	-	184.7	184.9	184.9	184.9	184.3	184.3	184.3	184.3	181.4	181.0
Commonwealth[4]	167.8	167.8	-	-	-	-	-	-	-	-	-
Alcan[5]	163.3	163.3	-	-	-	-	-	-	-	-	-
Columbia Falls[5]	163.3	163.3	-	-	-	-	-	-	-	-	-
National Aluminum	95.4	95.4	93.9	86.2	81.6	81.6	81.6	81.6	81.6	81.6	81.6
Northwest Aluminum[7]	81.6	-	-	-	-	-	-	-	-	-	-
Martin Marietta[4]	-	81.6	249.5	249.5	249.5	190.5	190.5	190.5	190.5	190.5	190.5
Southwire	79.6	79.6	78.5	86.2	81.6	81.6	81.6	81.6	81.6	81.6	81.6
Total	3844.1	4345.1	4761.9	4997.7	5018.8	4992.8	4992.8	4791.4	4737.0	4711.4	4711.0

(1) Capacities shown are as reported for December 31. They include nominal ownership of plants owned by more than one company.
(2) Formally the Anaconda Company (Aluminum Division)
(3) Alumax acquired Howmet in 1983.
(4) Commonwealth acquired 67% of Martin Marietta in 1985.
(5) Alcan Aluminum and Columbia Falls Aluminum acquired 50% each of ARCO Aluminum in 1985.
(6) Formally included with Consolidated and Revere.
(7) Formally Martin Marietta Goldendale plant.

Note: Prior to 1976 consult the Aluminum Statistical Review Historical Supplement.

SOURCE: The Aluminum Association
CONVERSION FACTOR: One metric ton = 2,204.6 pounds.

Number of Plants in the U.S.

Number of Plants in the U.S.

SELECTED YEARS

PRODUCT	1985	1982	1977
Primary Ingot	30	32	32
Secondary Ingot	69	76	89
Sheet and Plate	44	68	49
Foil	26	27	27
Rod & Bar, Rolled and Continuous Cast	18	22	31
Wire, Bare, Conductor & Nonconductor	61	69	125
ACSR and Aluminum Cable, Bare	16	16	59
Wire & Cable, Insulated or Covered	43	43	90
Extruded Products	217	226	222
Drawn Tube	19	19	22
Welded Tube	16	18	32
Powder	19	17	18
Forgings	48	44	74
Impacts	13	16	29

na — Not available

SOURCE: 1977 U.S. Department of Commerce.
1982 and 1985: The Aluminum Association

The data presented here are based on a survey conducted by the Aluminum Association in 1985. Previous years are based on unofficial directories prepared by the U.S. Department of Commerce, Bureau of Industrial Economics.

The figures shown for each product for selected years represent number of plants—not companies, which in many instances operate more than one plant. No totals are shown since some plants produce more than one product. Data include captive plants (plants producing only for company's own use).

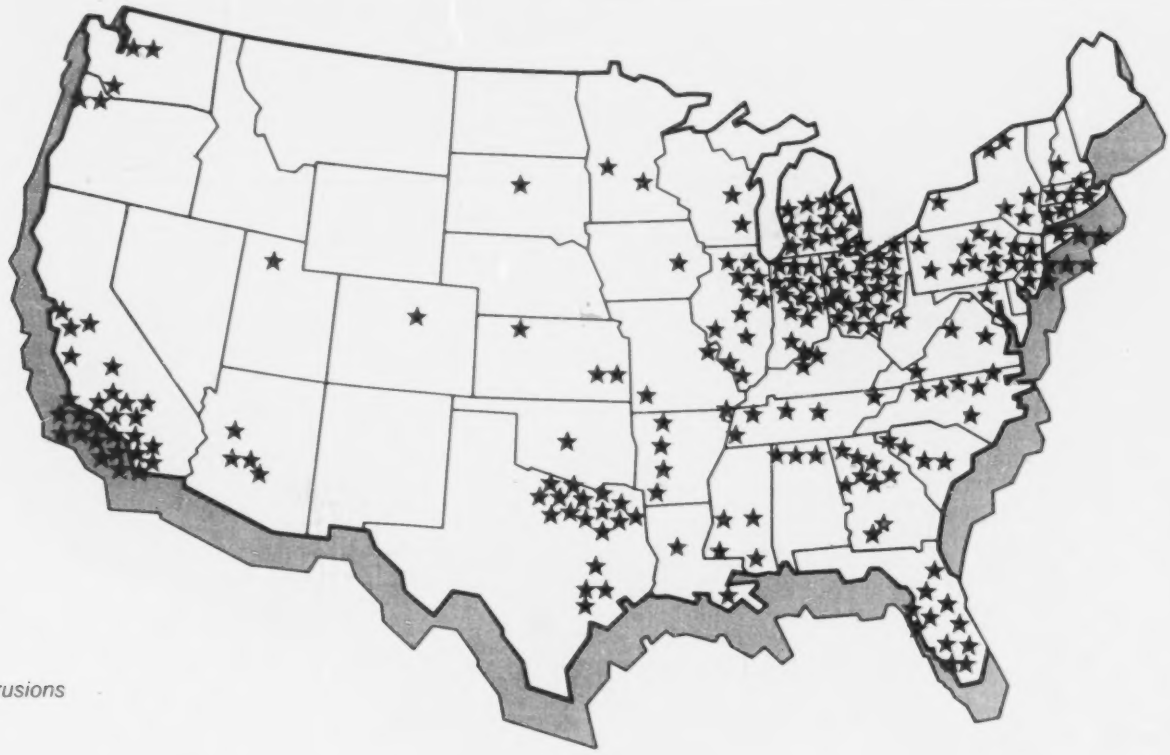
Five outline maps of the United States indicating the geographic distribution of aluminum plants by various product groups in 1985 are presented on pages 27-29.

★ *Primary*
■ *Secondary*

U.S. Plants — cont.

● *Foil*
★ *Sheet and Plate*

● *Bare Wire*
★ *Rolled and Continuous Cast Rod and Bar*
■ *ACSR and Cable and or Insulated or Covered Wire and Cable*



★ *Extrusions*

■ *Forgings and or Impacts*
● *Powder and Paste*
★ *Drawn and or Welded Tube*

Aluminum Scrap Consumption and Recovery

SCRAP CONSUMPTION DOWN 1.5 PERCENT

Total domestic industry scrap consumption on a gross weight basis, decreased 1.5 percent to a 1986 level of 1,948,000 metric tons from the 1985 volume of 1,978,000 metric tons.

Secondary recovery totaled 1,739,000 metric tons with new scrap accounting for 54 percent and old scrap for 46 percent.

Old scrap recovery at 805,000 metric tons was down 5.3 percent from 1985. Reclamation from aluminum cans declined 1,233,000 metric tons, down 1.0 percent from 1985 accounting for 49.0% of can shipments.

DESCRIPTION:

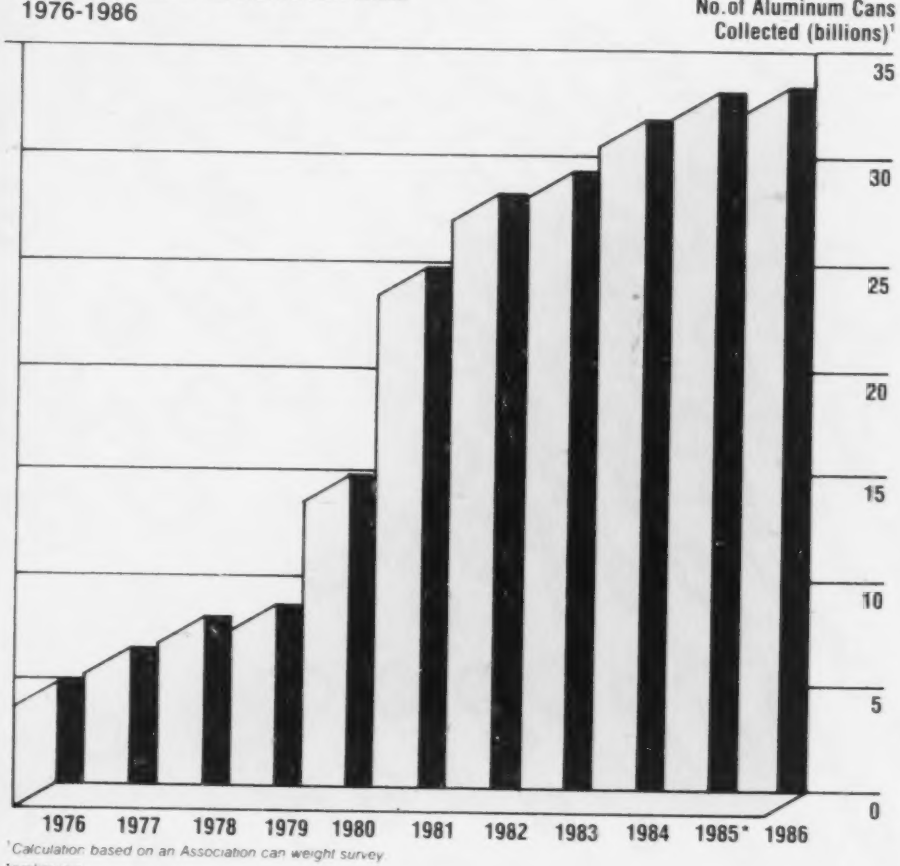
Recovery of aluminum from scrap, an important source of supply, is shown on pages 30 and 31. Two sets of scrap data are tabulated. The scrap consumption figures are on a gross weight basis as reported by plants consuming scrap. The aluminum recovery figures are on a recovered metal basis, that is the content of aluminum base alloy recovered from gross weight consumed. The figures in this table are consistent with domestic secondary recovery on page 23.

The aluminum recovery data are shown by source, that is by new and old scrap. New scrap, generated by plants making end products, and old scrap recovered from metal that has been used by consumers, are returned to plants making ingot and mill products and thus add to the total metal supply.

Through 1954, data on scrap consumption and recovery are based on complete reporting. Beginning in 1955, reported figures are expanded to industry totals by the Bureau of Mines to allow for a number of firms who do not report. In 1961, sweated pig consumption data were improved and included in old scrap.

Recovery of new scrap and old scrap over the past ten years has been about 25 percent of total supply (26.3 percent in 1986). However, this figures does not include "run-around" scrap consumed by the generating companies.

Aluminum Can Reclamation Data 1976-1986



[1] Calculation based on an Association can weight survey
*preliminary

Aluminum Can Reclamation Data 1976-1986

Year	Pounds of Aluminum Collected (millions)	No. of Aluminum Cans Collected (billions)[3]	Percent of Aluminum Cans Collected[4]
1976	212[1][2]	4.9	24.9
1977	280[1][2]	6.6	26.4
1978	340[1][2]	8.0	27.4
1979	360[1][2]	8.5	25.7
1980	609[1][2]	14.8	37.3
1981	1,017[2]	24.9	53.2
1982	1,124[2]	28.3	55.5
1983	1,144[2]	29.4	52.9
1984	1,226[2]	31.9	52.8
1985	1,245[5]	33.1	51.0
1986p	1,233[5]	33.3	49.0

(1) Represents total industry; includes an additional 18 million pounds in the year 1974 which accounts for all-aluminum cans collected by non-members of the Aluminum Association.
(2) SOURCE: Net receipts—U.S. Department of the Interior, Bureau of Mines.
(3) Calculation based on an Association can weight survey.
(4) Based on Can Manufacturers Institute aluminum beverage can shipments data logged one quarter.
(5) Estimated by the Statistical and Market Research Committee of the Aluminum Association.
p-Preliminary

Aluminum Scrap Consumption and Recovery 1946-1986

Metric Tons

SCRAP CONSUMPTION	SCRAP CONSUMPTION (Gross Weight Basis) As Reported[6]				RECOVERY[5] (Recoverd Metal Basis)		
Year	Total Industry[1]	Total	Secondary Smelters	Primary Producers[2][3]	Others[4]	Total Industry[1]	From New Scrap	From Old Scrap
1946	312,000	312,063	215,900	90,719	5,443	252,266	170,133	82,133
1947	372,920	372,920	283,123	81,656	8,141	312,834	164,193	148,641
1948	294,380	294,380	197,465	91,131	5,783	260,162	173,391	86,771
1949	180,567	180,567	116,549	59,514	4,504	163,986	123,529	40,457
1950	247,838	247,838	174,224	61,976	11,638	221,052	151,781	69,272
1951	301,457	301,457	210,777	72,996	17,685	265,452	195,969	69,483
1952	315,459	315,459	231,410	70,706	13,343	276,261	211,610	64,650
1953	374,973	374,973	250,639	105,244	19,090	334,361	262,747	71,614
1954	317,985	317,985	216,882	82,959	18,144	283,994	223,722	60,272
1955	444,500	387,413	284,749	78,689	23,974	375,600	285,300	90,300
1956	469,000	398,569	301,017	80,517	17,035	388,300	300,300	88,000
1957	482,600	420,031	312,982	85,276	21,773	403,800	315,300	88,500
1958	390,100	340,709	250,170	70,110	20,430	321,100	249,000	72,100
1959	489,000	431,792	348,822	57,078	25,892	407,300	313,000	94,300
1960	474,500	400,507	321,046	49,321	30,141	397,300	311,100	86,200
1961	525,300	451,888	300,921	40,435	110,532	440,000	298,900	141,100
1962	635,000	539,665	401,132	33,131	105,402	527,900	376,900	151,000
1963	707,600	587,398	447,399	40,719	99,280	593,300	449,100	144,200
1964	771,100	646,150	488,970	53,459	103,720	641,400	494,400	147,000
1965	880,000	740,833	526,031	86,170	128,632	752,100	566,100	186,000
1966	979,800	813,149	579,477	113,841	119,831	805,200	635,300	169,900
1967	961,600	800,866	559,870	111,573	129,423	796,500	638,200	158,300
1968	1,105,000	920,865	634,391	138,053	148,421	904,500	740,300	164,200
1969	1,207,500	1,006,166	673,245	178,587	154,334	1,043,200	861,800	181,400
1970	1,058,700	882,276	589,973	139,025	153,279	907,200	728,500	178,700
1971	1,097,700	911,529	580,522	154,908	176,099	952,600	756,600	196,000
1972	1,217,500	1,045,480	640,918	186,184	218,378	1,021,500	794,700	226,800
1973	1,343,600	1,145,277	668,438	192,820	284,020	1,126,700	886,300	240,400
1974	1,313,600	1,094,131	571,735	216,781	305,616	1,163,000	887,200	275,800
1975	1,319,100	1,117,804	554,785	310,995	252,023	1,121,300	815,600	305,700
1976	1,579,400	1,329,458	688,553	331,298	309,607	1,334,400	963,400	371,000
1977	1,681,900	1,422,675	763,184	386,222	273,269	1,456,000	974,300	481,700
1978	1,733,600	1,466,492	800,777	396,770	268,944	1,517,700	996,100	521,600
1979	1,832,500	1,546,794	836,577	401,217	308,999	1,612,100	1,055,100	557,000
1980	1,798,100	1,536,454	802,191	491,491	242,771	1,576,700	959,800	616,900
1981	2,031,200	2,031,200	1,036,000	663,200	332,000	1,789,900	1,031,500	758,400
1982	1,900,600	1,900,600	880,000	673,100	347,500	1,665,600	883,600	782,000
1983	2,018,900	2,018,900	897,000	774,000	347,900	1,773,000	953,000	820,000
1984	2,010,000	2,010,000	872,000	782,000	356,000	1,760,000	935,000	825,000
1985	1,978,000	1,978,000	923,000	727,000	328,000	1,762,000	912,000	850,000
1986p	1,948,000	1,948,000	872,000	756,000	320,000	1,739,000	934,000	805,000

r — revised
p — preliminary
(1) As reported, 1946-54; estimates expanded from reported figures, 1955 to present.
(2) For 1951-53 includes small amounts reported consumed by non-integrated fabricators.
(3) Represents 100 per cent scrap consumption coverage by primary producers.
(4) Most consumption of sweated pig apparently not reported by "others" prior to 1961.
(5) Recovery from sweated pig included in new scrap 1946-60; old scrap 1961 to present.
(6) Figures 1981 to present represent estimated full coverage.

SOURCE: U.S. Department of the Interior, Bureau of Mines and U.S. Depatment of Commerce, Bureau of Industrial Economics.

Conversion Factor: One metric ton = 2,204.6 pounds.

U.S. Aluminum Foreign Trade Statistics

IMPORTS ACCOUNT FOR 28 PERCENT OF U.S. SUPPLY

For the year 1986 imports of aluminum ingot and mill products accounted for 27.8 percent of total aluminum supply in the United States. Exports comprised 5.9 percent of total industry shipments. These facts illustrate the major role of foreign trade in the U.S. aluminum industry.

1986 imports of aluminum ingot jumped 55.3 percent to 2,974 million pounds as compared with 1,915 million pounds in 1985. Imports of semifabricated products also increased, rising to 1,089 million pounds, up 6.7 percent from 1985.

Exports of aluminum ingot fell in 1986 to 462 million pounds, a 39.7 percent decline from a 1985 level of 766 million pounds. Exports of semifabricated products increased to 449 million pounds, 2.3 percent rise from 1985.

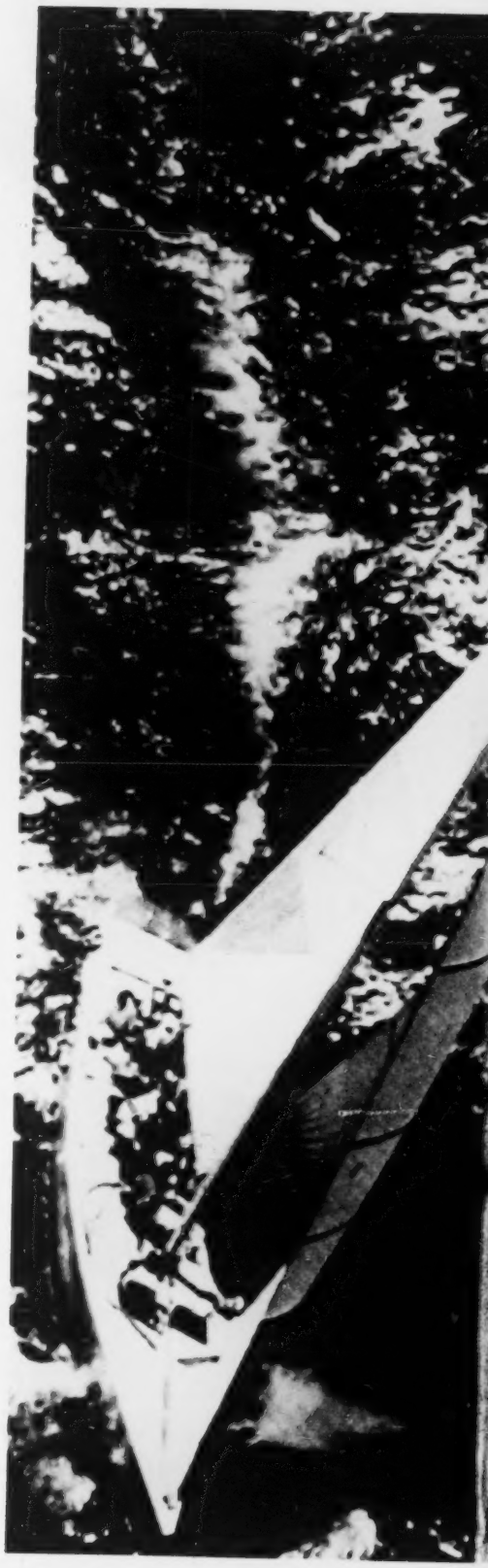
Exports of aluminum scrap showed a 7.3 percent decline to a 765 million pound level.

In 1986 the U.S. was again a net importer of aluminum by an amount of 2,750 million pounds.

The product composition of United States imports and exports for the years 1976-1986 is graphically presented on pages 34 and 35. The data for total imports and exports as well as the detail of semifabricated aluminum product imports and exports for 1986 and the preceding 10 years are tabulated on pages 36 and 37. The total imports include dross and skimmings and the gross weight of scrap. In the table on United States Supply (page 23) dross and skimmings are excluded, and the recovered weight of imported scrap is used. It is counted as part of domestic secondary recovery for the years 1972-1986 and shown as a separate supply component for years prior to 1972.

The detail of 1986 aluminum imports by product and country of origin is presented on pages 38 and 39. Similarly, the exports on a product basis by country of destination are detailed on pages 40 and 41.

For information on years prior to 1976 see the Aluminum Statistical Review—Historical Supplement.



Both the America's Cup winner "Stars And Stripes" (left foreground) and Australian defender "Kookaburra III" raced aluminum hulls and extruded aluminum masts, due to the metal's light weight and ability to be more readily modified than other materials.

U.S. Imports

IMPORTS JUMP 37.3 PERCENT
Aluminum imports totaled 4,426 million pounds during 1986, up 37.3 percent from 1985. Ingot, which accounted for 67.2 percent of all aluminum imported during 1986, increased 55.3 percent to 2,974 million pounds. Canada topped the list of ingot importers with imports of 1,915 million pounds, 64.4 percent of total ingot imports.

Semifabricated aluminum products increased 6.7 percent to 1,089 million pounds. Japan led the list of over 50 countries exporting semifabricated products to the U.S. with a total of 329 million pounds or 30.2 percent of total semifabricated products imports. Aluminum sheet imports, at 757 million pounds, were up 9.7 percent. Japan and Canada continue to be the largest source at 40.8 percent and 14.1 percent of the total respectively.

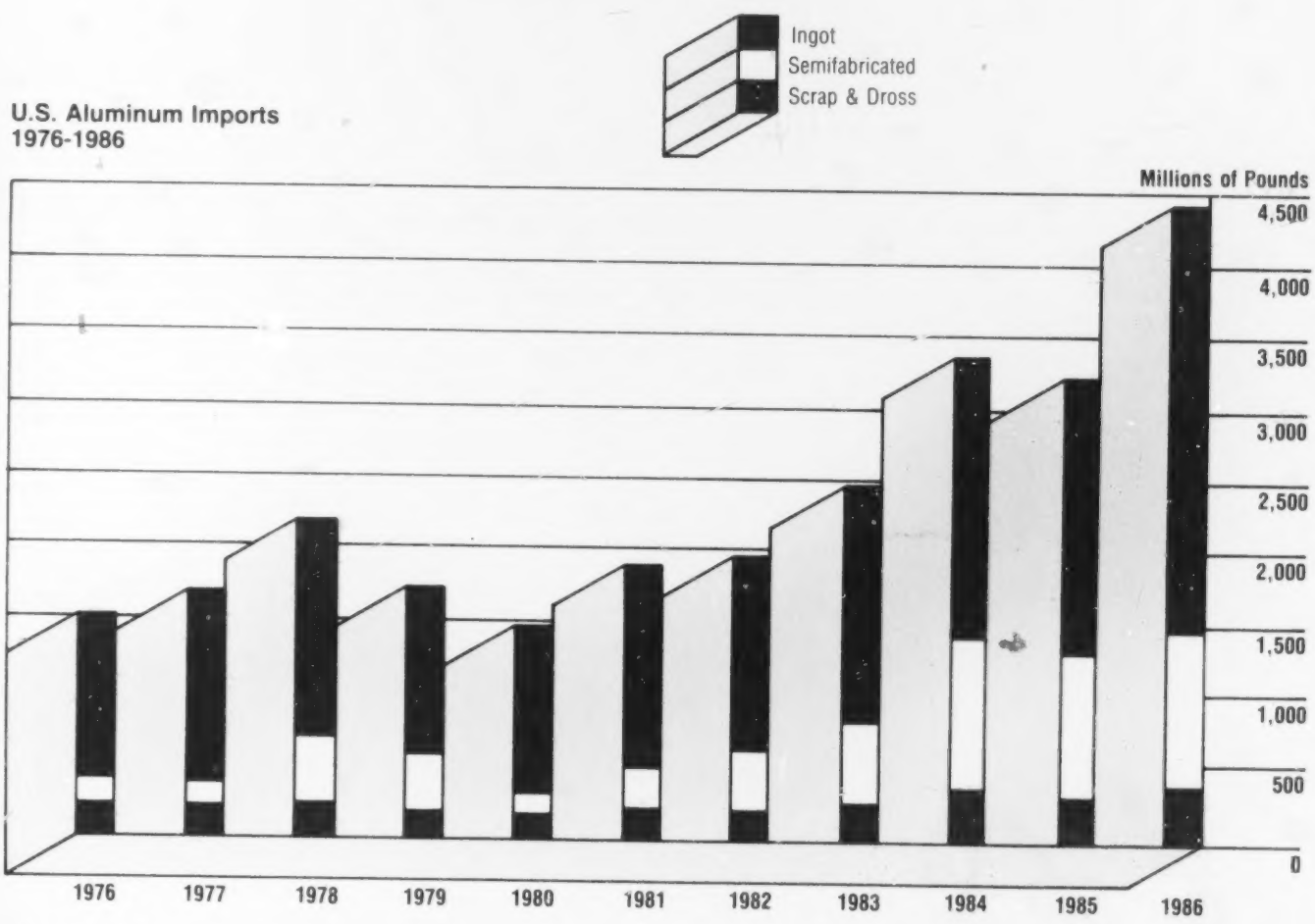
1986 scrap imports increased 27.3 percent to 358 million pounds from a 1985 level of 281 million pounds.

Imported semifabricated products achieved a 7.7 percent penetration of the U.S. market, up from 6.8 percent in 1985.

DESCRIPTION:

The graph below illustrates the trend of U.S. aluminum imports in the years 1976-1986. In addition to showing the imports of ingot, scrap, and dross and skimmings, the upper half of the table on pages 36 and 37 shows in detail the categories of imports of semifabricated products for the years 1976-1986. Imports of aluminum by country for the year 1986 are shown on pages 38 and 39.

U.S. Aluminum Imports
1976-1986



Source: the Aluminum Association

U.S. Exports

U.S. EXPORTS DOWN 17.4 PERCENT

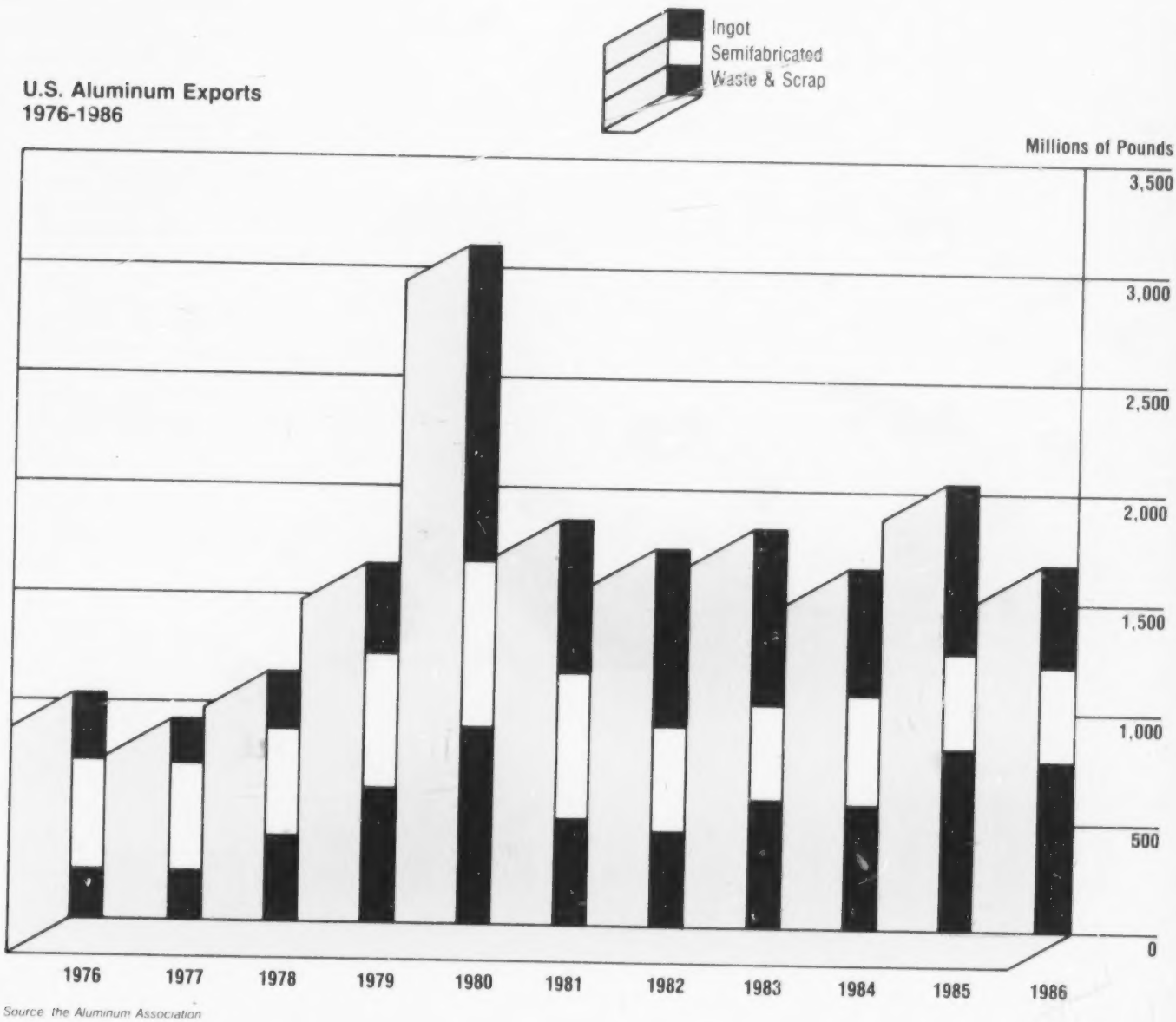
Total aluminum exports during 1986 were 1,676 million pounds, down 17.4 percent from 1985. Ingot exports fell 39.7 percent to 462 million pounds from a 1985 level of 766 million pounds. Semifabricated exports increased 2.3 percent from 439 million pounds in 1985 to 449 million pounds in 1986. Exports of scrap fell from 826 million pounds in 1985 to 765 million pounds in 1986, about 7.3 percent.

Of the more than 110 countries receiving aluminum from the U.S. in 1986, Japan received 49.8 percent or 835 million pounds, (290 ingot, 528 scrap and 17 semifabricated). Exports to Canada were 387 million pounds of which 288 million pounds were semifabricated products and exports to Mexico were 123 million pounds.

DESCRIPTION:

The graph below illustrates the trend of U.S. aluminum exports in the years 1976-1986. In addition to showing the exports of ingot and scrap, the lower portion of the table on pages 36 and 37 shows the detail of exports of semifabricated products for the years 1976-1986. Exports of aluminum by country for 1986 are shown on pages 40 and 41.

U.S. Aluminum Exports 1976-1986



Source: the Aluminum Association

United States Imports and Exports

United States Imports and Exports 1976-1986

Thousands of pounds

PRODUCT	1986	1985	1984	1983	1982
Total Imports	4,426,199	3,223,576	3,353,255	2,465,217	1,966,647
TOTAL INGOT & SEMIFABRICATED	4,062,513	2,935,770	3,034,098	2,255,700	1,814,325
INGOT	2,973,633	1,915,099	1,944,381	1,637,353	1,358,751
SEMIFABRICATED, TOTAL	1,088,880	1,020,671	1,089,717	618,347	455,574
Sheet & plate, Total	836,049	770,093	884,498	536,059	414,819
Circles & disks	32,059	25,936	29,144	19,131	16,404
Other	803,990	744,157	855,354	516,929	398,415
Foil, Total	60,285	57,176	54,005	29,238	19,328
Over .00035"	33,218	37,733	27,045	12,345	8,749
Not over .00035"	24,113	17,891	23,631	15,226	8,708
Capacitor	2,954	1,552	3,329	1,666	1,870
Rod & bar	128,922	128,703	82,269	27,435	10,057
Wire	14,487	21,105	26,966	6,444	3,202
Cable	4,930	4,472	5,337	2,021	101
Angles, shapes, etc	18,459	16,312	12,690	3,478	1,272
Pipe & tube	13,452	7,381	8,981	3,170	1,279
Powder & paste	12,296	15,430	14,971	10,503	5,515
SCRAP	357,847	281,091	303,522	195,049	148,675
DROSS & SKIMMINGS	5,839	6,715	15,634	14,469	3,647
Total Exports	1,676,082	2,030,140	1,646,169	1,819,397	1,723,285
TOTAL INGOT & SEMIFABRICATED	910,790	1,204,187	1,076,484	1,240,875	1,294,687
INGOT	462,068	765,648	572,316	795,216	802,348
SEMIFABRICATED, TOTAL	448,722	438,539	504,169	445,659	492,339
Sheet & plate	359,818	329,311	402,992	318,667	323,074
Foil	13,256	12,031	11,917	10,952	12,933
Rod & bar	21,262	22,853	22,133	24,374	51,980
Wire, bare	6,755	8,932	6,162	9,972	11,791
Other conductor	1,139	5,704	5,699	35,845	46,953
Angles, shapes, etc	15,541	11,686	11,137	10,310	9,298
Pipe & tube, Total	9,736	10,389	10,492	9,480	13,157
Electric conduit	2,845	2,828	1,335	1,730	3,218
Other	6,891	7,561	9,157	7,751	9,939
Powder	6,000	6,278	8,086	5,075	6,082
Castings	9,780	20,190	21,488	18,199	14,359
Forgings	5,435	7,166	4,064	2,785	2,711
SCRAP	765,292	825,953	569,685	578,522	428,598
Net Imports*	2,750,117	1,931,436	1,721,263	645,820	243,362

Detail may not add to totals due to rounding.

** Imports less exports*

NOTE: Prior to 1976, consult the Aluminum Statistical Review—Historical Supplement.

SOURCE: U.S. Department of Commerce, Bureau of The Census.

1981	1980	1979	1978	1977	1976
1,894,847	1,453,529	1,714,794	2,194,902	1,688,604	1,524,971
1,725,220	1,329,404	1,567,857	2,000,058	1,505,431	1,339,742
1,421,311	1,161,328	1,141,517	1,515,576	1,340,658	1,150,741
303,909	168,076	426,339	484,482	164,773	189,001
247,139	126,117	357,285	433,684	128,675	150,543
11,673	7,757	21,529	20,473	15,363	16,949
235,466	118,360	355,756	413,211	113,312	133,594
13,430	9,099	17,925	21,451	9,763	10,993
4,791	3,532	6,020	7,489	3,679	4,593
6,608	4,116	10,036	12,626	5,141	5,253
2,031	1,452	1,870	1,336	943	1,147
34,238	16,343	37,959	22,133	18,146	20,907
3,220	2,256	6,902	3,840	3,526	4,072
8	144	146	77	438	507
1,320	1,206	1,664	1,793	2,082	490
1,167	682	1,098	868	731	919
3,388	12,228	3,361	637	1,415	570
163,988	119,603	136,632	184,305	179,789	171,427
5,639	4,522	10,305	10,539	3,384	13,802
1,852,324	3,082,645	1,637,086	1,136,424	915,508	1,038,439
1,370,001	2,193,283	1,022,924	747,409	712,182	820,522
688,321	1,429,813	401,300	253,234	195,542	304,732
681,680	763,470	621,625	494,174	516,640	515,790
411,385	425,792	404,509	291,764	344,309	343,014
21,338	37,911	20,566	11,902	13,062	14,252
102,463	136,736	61,510	59,672	27,433	54,913
24,653	57,737	30,129	23,906	15,240	18,364
70,324	29,031	30,600	56,121	58,137	27,630
8,507	25,528	22,402	17,110	8,494	9,761
15,216	16,500	16,178	19,115	21,370	19,755
3,137	1,569	1,901	3,493	7,230	4,577
12,079	14,931	14,277	15,622	14,140	15,178
6,769	16,047	14,356	14,584	14,804	16,879
17,860	14,992	17,840	na	8,146	7,759
3,165	3,195	3,526	na	5,643	3,463
482,323	889,363	614,162	389,015	203,326	217,917
42,523	1,629,116	77,708	1,058,478	773,096	486,532

United States Imports by Product and Country

United States Imports by Product and Country—1986

Thousands of Pounds

Country	Total	Ingot	Scrap Dross and Skimmings	Semi-fabricated Products	Sheet	Plate	Circles & Discs
TOTAL ALL COUNTRIES	4,426,199	2,973,633	363,686	1,088,880	756,619	47,371	32,059
AFRICA	225,328	214,842	407	10,079	9,670	—	—
Ghana	142,953	142,953	—	—	—	—	—
South Africa, Rep	81,854	71,369	407	10,079	9,669	—	—
Other	520	520	—	*	*	—	—
NORTH AMERICA	2,315,199	1,915,205	260,838	139,156	106,948	11,498	4,858
Canada	2,315,199	1,915,205	260,838	139,156	106,948	11,498	4,858
LATIN AMERICA	700,553	491,563	47,090	161,900	19,455	143	759
Argentina	84,511	70,670	—	13,841	5,973	131	291
Brazil	275,576	256,835	—	18,741	1,818	4	36
Mexico	36,861	6,365	27,029	3,467	2,030	8	338
Panama	2,930		2,930	—	—	—	—
Peru	3,310	3,297	—	13	—	—	—
Venezuela	289,937	152,521	14,400	123,016	7,844	—	10
Other	7,428	1,875	2,731	2,822	1,790	—	83
EAST ASIA	340,936	1,648	123	339,164	311,170	1,020	7,467
Hong Kong	6,088	—	—	6,088	2,156	—	3,489
Japan	330,549	1,403	93	329,053	308,376	1,020	3,978
Korea, Republic	1,466	—	31	1,435	176	—	—
Taiwan, ROC	2,834	245	—	2,589	102	—	*
SOUTH ASIA	244,858	196,674	51	48,133	41,746	210	162
Bahrain	68,329	39,860	—	28,469	26,330	210	56
Israel	7,021	705	—	6,315	3,414	*	—
Saudi Arabia	4,722	4,273	—	499	246	—	47
Turkey	11,906	429	—	11,477	11,317	—	—
United Arab Emirates	151,659	151,108	—	551	—	—	—
Other	1,222	299	51	872	439	—	59
EUROPE	386,945	36,001	5,544	345,399	224,885	34,310	18,781
Austria	3,534	—	—	3,534	2,854	21	
Belgium	72,095	226	886	70,983	57,726	849	7,052
France	76,399	7,143	828	68,428	45,206	16,318	1,426
Germany, F R	70,823	1,533	1,575	67,716	35,194	4,780	2,029
Greece	11,594	132	—	11,462	5,411	237	476
Ireland	3,801	109	—	3,692	1,801	38	1,291
Italy	18,123	23	173	17,927	12,703	399	1,563
Netherlands	19,532	3,892	—	15,640	15,312	—	83
Norway	10,154	406	—	9,748	9,666	36	—
Spain	23,101	18,471	—	4,630	882	—	688
Sweden	5,136	—	—	5,136	3,867	—	—
Switzerland	15,585	87	39	15,459	8,292	2,877	2,065
United Kingdom	34,572	3,848	2,044	28,680	10,788	8,753	2,078
Yugoslavia	21,856	131	—	21,725	14,547	—	30
Other	641	—	—	641	635	—	—
OCEANIA	94,197	70,341	5,295	18,560	18,430	117	—
Australia	94,167	70,341	5,270	18,555	18,426	117	—
Other	30	—	25	5	4	—	—
TOTAL WESTERN WORLD	4,308,015	2,926,275	319,348	1,062,392	732,306	47,298	32,027
OTHER	118,184	47,358	44,338	26,488	24,313	73	32
Hungary	12,505	56	—	12,499	10,353	—	32
Romania	49,096	35,112	—	13,985	13,909	73	—
USSR	56,075	12,190	43,884	—	—	—	—
Other	508	—	453	54	52	—	—

(*) Indicates less than 500 pounds.

Details may not add to totals because of rounding.

SOURCE: U.S. Department of Commerce, Bureau of The Census.

NOTE: Reimports are metal exported for processing and returned for further processing (TSUSA 806.30)

Total Foil	Capacitor Foil	Foil, not Over 0.00035	Foil over 0.00035	Rod and Bar	Wire	ACSR and Bare Cable	Angles, Shapes & Sections	Pipes Tubes & Fittings	Powder and Paste
60,285	2,954	24,113	33,218	128,922	14,487	4,930	18,459	13,452	2,296
369	—	—	369	7	—	—	34	—	—
—	—	—	—	—	—	—	—	—	—
369	—	—	369	7	—	—	34	—	—
—	—	—	—	—	—	—	*	*	—
7,523	—	4,295	3,229	519	3,242	15	2,876	737	940
7,523	—	4,295	3,229	519	3,242	15	2,876	737	940
1,640	—	801	839	114,822	5,063	3,053	8,987	6,411	1,566
—	—	—	—	5,992	622	—	683	148	—
913	—	655	258	4,814	515	185	3,494	5,672	1,289
2	—	—	2	133	—	—	794	151	12
—	—	—	—	—	—	—	—	—	—
—	—	—	—	7	—	—	—	5	*
161	—	—	161	103,840	3,922	2,868	3,936	434	
563	—	146	417	36	4	—	81	—	265
10,579	380	5,891	4,308	803	1,306	1,123	2,875	2,772	49
—	—	—	—	—	*	—	83	—	—
10,559	375	5,891	4,292	482	481	299	1,394	2,414	49
10			10	44	1	807	291	108	—
11	5		6	278	825	17	1,107	250	*
519	—	—	519	551	336	*	2,207	373	2,030
—	—	—	—	—	—	—	—	—	1,873
5	—	—	5	—	336	*	2,207	354	—
—	—	—	—	—	—	—	—	—	157
159	—	—	159	—	—	—	—	—	—
—	—	—	—	551	—	—	—	—	—
354	—	—	354	—	*	*	*	19	—
37,880	2,574	13,126	22,179	12,220	4,450	739	1,469	3,155	7,419
599	—	*	599	16	—	—	33	11	—
2,513	15	312	2,186	2,320	252	99	*	82	89
3,874	543	1,105	2,226	766	457	*	38	99	243
19,924	529	9,675	9,720	221	647	15	253	1,066	3,587
5,139	—	—	5,139	—	—	—	—	200	—
—	—	—	—	—	—	—	42	22	496
2,380	1,472	28	880	708	37	*	3	96	37
72	*	44	28	6	1		1	57	106
—	—	—	—	—	—	38	—	6	—
32	—	—	32	557	532	565	711	653	10
141	—	*	141	2	19	—	210	13	883
2,091	—	1,870	221	6	—	*	117	11	*
373	14	92	266	2,744	1,218	21	58	829	1,818
738	—	—	738	4,873	1,375	—	2	8	150
4	—	—	4	—	—	—	—	2	
2	—	—	2	—	—	—	10	*	—
2	—	—	2	—	—	—	9	*	—
*	—	—	*	—	—	—	1	—	—
58,512	2,954	24,113	31,445	128,992	14,487	4,930	18,485	13,448	12,004
1,772	—	—	1,772	—	*	—	1	4	292
1,770	—	—	1,770	—	—	—	—	3	292
3	—	—	3	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	*	—	1	1	—

United States Exports by Product and Country

United States Exports by Product and Country—1986

Thousands of Pounds

Country	Total	Ingot	Waste & Scrap	Semi-fabricated Products	Sheet	Plate	Circles & Discs
TOTAL ALL COUNTRIES	1,676,082	462,068	765,292	448,722	332,681	22,646	4,491
AFRICA	2,333	338	123	1,873	165	9	—
Ghana	469	166	—	303	18	2	—
Nigeria	483	—	—	483	—	—	—
South Africa, Rep. of	299	3	—	296	82	8	—
Other	1,082	169	123	790	65	—	—
NORTH AMERICA	387,309	66,800	32,463	288,046	243,268	8,956	4,105
Bermuda	79	—	42	38	6	—	—
Canada	387,230	66,800	32,421	288,008	243,262	8,956	4,105
LATIN AMERICA	173,636	31,701	65,289	76,464	59,354	1,732	99
Brazil	10,383	1,193	7,928	1,262	267	460	1
Colombia	3,889	136	12	3,741	3,583	7	—
Dominican Rep	3,031	2,266	1	764	215	57	1
Mexico	123,201	17,135	56,533	49,532	40,637	598	8
Panama	2,746	2,111	140	494	82	9	—
Peru	1,035	858	13	164	112	6	—
Trinidad	1,539	700	1	838	5	5	1
Venezuela	20,595	6,063	1	14,531	13,465	450	39
Other	7,218	1,238	661	5,319	988	141	50
EAST ASIA	988,673	346,229	612,471	29,973	10,901	1,897	117
Hong Kong	4,976	1,947	1,000	2,030	1,043	54	46
Japan	835,170	289,698	528,229	17,243	7,893	1,217	69
Korea, Rep. of	37,278	24,116	4,255	8,907	1,719	223	2
Taiwan ROC	111,248	30,469	78,986	1,793	246	403	*
SOUTH ASIA	19,635	6,334	1,126	12,174	2,594	461	57
Indonesia	639	464	—	175	3	—	—
Israel	4,112	724	124	3,264	1,417	374	41
Kuwait	704	—	—	704	321	—	—
Saudi Arabia	3,774	*	3	3,771	248	17	16
Singapore	3,223	1,627	483	1,113	379	29	—
Thailand	3,955	3,188	—	766	15	7	—
United Arab Emirates	1,325	—	289	1,036	38	1	—
Other	1,904	330	228	1,345	173	33	—
EUROPE	100,750	10,611	52,718	37,422	16,053	9,498	105
Belgium	11,241	220	8,584	2,437	1,349	10	—
France	3,376	367	1,026	1,983	394	921	42
Germany, F.R.	20,332	3,462	11,911	4,959	1,425	2,223	3
Ireland	1,149	23	—	1,126	985	—	—
Italy	22,881	107	16,027	6,746	2,049	1,117	5
Netherlands	16,324	1,044	11,242	4,038	1,864	1,004	1
Spain	4,302	242	2,338	1,722	1,138	326	—
Sweden	1,038	80	—	958	609	226	*
Switzerland	798	17	36	744	135	377	—
United Kingdom	18,582	4,954	1,500	12,128	5,888	3,248	2
Other	727	94	53	581	217	46	53
OCEANIA	2,395	49	—	2,346	227	75	7
Australia	2,011	49	—	1,963	146	73	—
Fr. Pacific Isles	222	—	—	222	—	—	—
Other	161	*	—	161	81	2	7
TOTAL WESTERN WORLD	1,674,652	462,062	764,147	448,444	332,557	22,629	4,491
OTHER	1,429	6	1,145	278	125	17	—
China, P.R.	1,386	6	1,111	269	125	16	—
German D.R.	34	—	34	—	—	—	—
Other	9	—	—	9	—	1	—

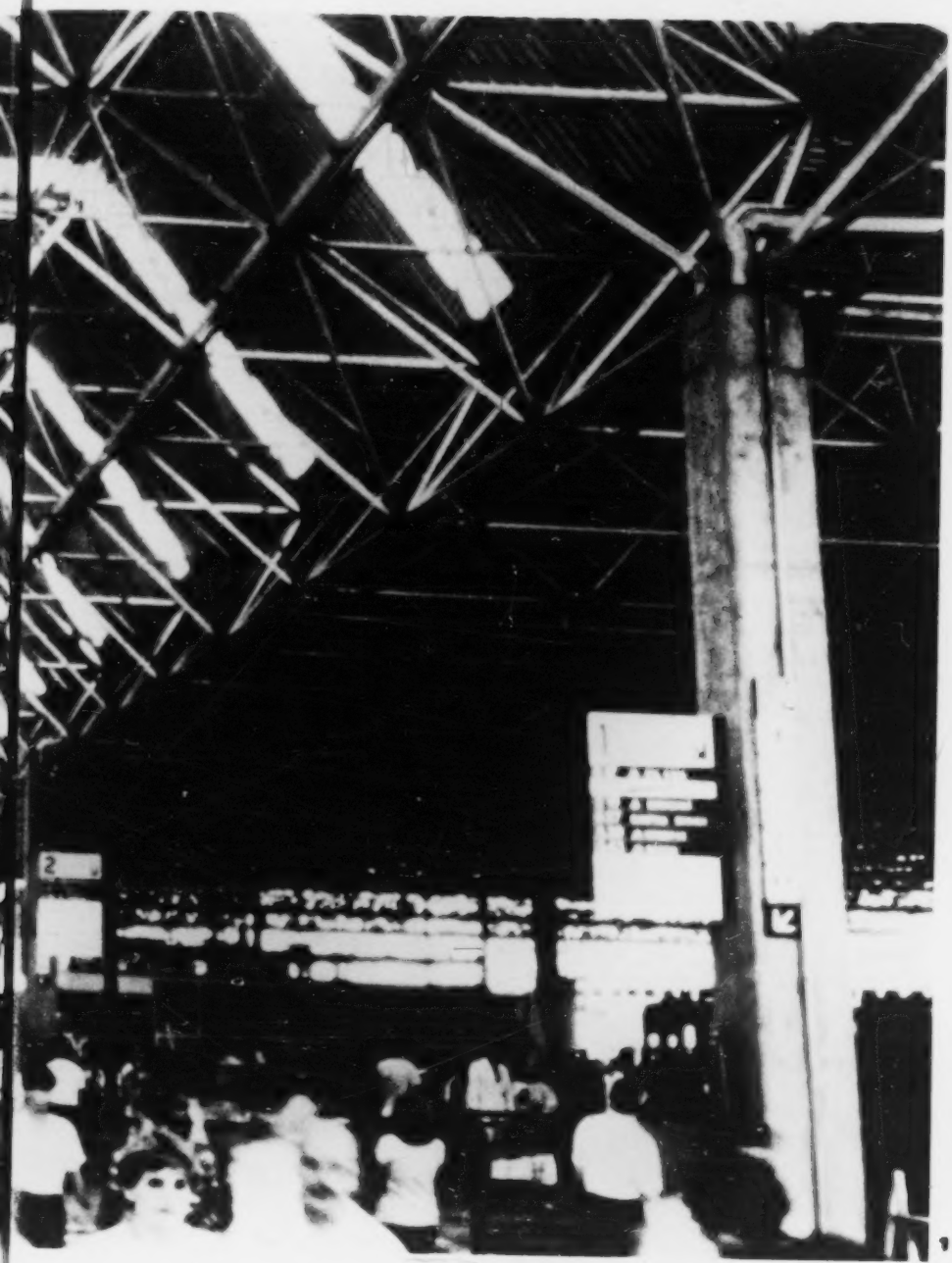
(*) Less than 500 pounds

SOURCE: U.S. Department of Commerce, Bureau of The Census
Detail may not add to totals due to rounding

Foil	Rod and Bar	Wire	ACSR & Bare Cable	Angles, Shapes & Sections	Total Pipe & Tube	Electrical Conduit	Other Pipe & Tube	Powder & Paste	Castings	Forgings
13,256	21,262	6,755	1,139	15,541	9,736	2,845	6,890	6,000	9,780	5,435
99	587	52	20	17	271	32	238	650	3	—
34	187	21	8	6	5	5	*	23	*	—
—	390	—	—	4	90	—	90	—	—	—
5	4	11	—	2	20	2	18	164	1	—
60	6	20	12	6	156	26	130	463	2	—
3,338	5,901	2,444	626	2,501	5,588	2,564	3,024	1,373	6,582	3,442
	1	7		12	13	1	13	—	—	—
3,338	5,900	2,437	626	2,490	5,575	2,563	3,012	1,373	6,502	3,442
2,753	1,903	2,506	357	1,627	2,202	123	2,079	1,438	2,178	496
17	4	13	4	184	77	31	45	147	87	3
10	36	1	12	1	8	*	8	68	16	—
134	47	62	7	176	50	3	47	3	*	12
1,164	1,158	1,278	125	152	1,332	56	1,276	714	1,988	379
275	21	80	12	2	11	*	10	2	*	—
12	13	4	—	6	3	3	—	7	1	—
270	15	—	—	466	68	—	68	—	7	2
258	7	84	3	1	39	3	36	170	15	—
614	602	985	194	640	615	27	588	327	64	100
532	6,362	325	85	8,105	593	78	515	785	151	121
283	50	58		449	20		20	16	12	—
157	5,673	46	1	1,275	351	75	276	467	17	76
13	517	117	81	5,942	120		120	44	119	10
80	122	103	3	438	102	3	99	258	3	36
5,454	1,580	795	28	476	360	9	350	116	176	79
83	30	*	—	16	30	3	27	13	1	—
22	808	54	6	286	95	*	95	16	73	73
363	—	6	—	5	7	—	7	—	2	—
3,347	19	—	3	78	40	*	40	*	3	—
466	24	45	—	33	16	6	10	58	64	—
15	635	45	—	38	2	—	2	*	10	—
984	2	9	—	1	—	—	—	*	—	2
174	61	637	19	21	170	1	169	28	24	3
985	3,802	533	21	2,379	528	40	489	1,570	745	1,202
45	41	31	—	231	8	*	8	88	180	455
59	166	62	14	129	19	*	19	91	6	80
326	200	161	3	50	86	*	86	144	325	14
10	18	75	—	30	3	—	3	—	6	—
73	2,751	6	*	443	12	—	12	78	14	198
124	32	77	—	540	26	5	21	295	31	43
5	44	3	—	75	2	*	2	1	9	119
11	1	4	*	43	6	—	6	15	10	32
33	9	7	—	36	69	*	68	68	11	—
278	455	92	—	792	280	34	246	763	109	220
22	85	15	3	9	18	*	18	26	45	41
95	1,121	101	3	441	207	—	207	19	22	29
59	1,108	80	3	229	201	—	201	18	16	29
11	—	—	—	211	*	—	*	—	—	—
25	12	20	—	1	5	—	5	1	6	—
13,256	21,255	6,749	1,139	15,535	9,735	2,845	6,890	5,951	9,777	5,370
*	7	6	—	6	*	—	*	49	3	65
*	7	3	—	6	*	—	*	44	3	65
—	—	—	—	—	—	—	—	—	—	—
—	—	3	—	—	—	—	—	5		—

World Aluminum Statistics

Aluminum sheet and extrusions were used in this bus terminal in São Paulo, Brazil.



The aluminum industry is international by its very nature. From the extraction of its basic source material at bauxite sites located in a number of countries throughout the world to its fabrication and distribution in every nation on earth, the aluminum industry should be viewed in a world-wide perspective. This section attempts to provide data on two of the key aspects of world aluminum, world primary aluminum production and the apparent per capita consumption of aluminum for selected countries.

World production of primary aluminum in 1986 is estimated to have been 15,314 thousand metric tons, down 0.2 percent from 1985. World primary aluminum production is presented by country for the years 1976-1986 on pages 45.

Data on the consumption of aluminum on a per capita basis are presented for 41 countries. These countries represent three-quarters of the world's production of primary aluminum. The data are presented in a uniform statistical format for the years 1976-1986. The data for supply and consumption show ingot and mill product detail for imports and exports. Midyear population figures are presented as part of the calculation of consumption on a per capita basis for each country.

World Aluminum Statistical data is presented in metric tons, with one exception: the per capita aluminum consumption summary on page 47 is expressed in pounds per person per year. Individual country data tables show per capita consumption in kilograms.

World Primary Aluminum Production

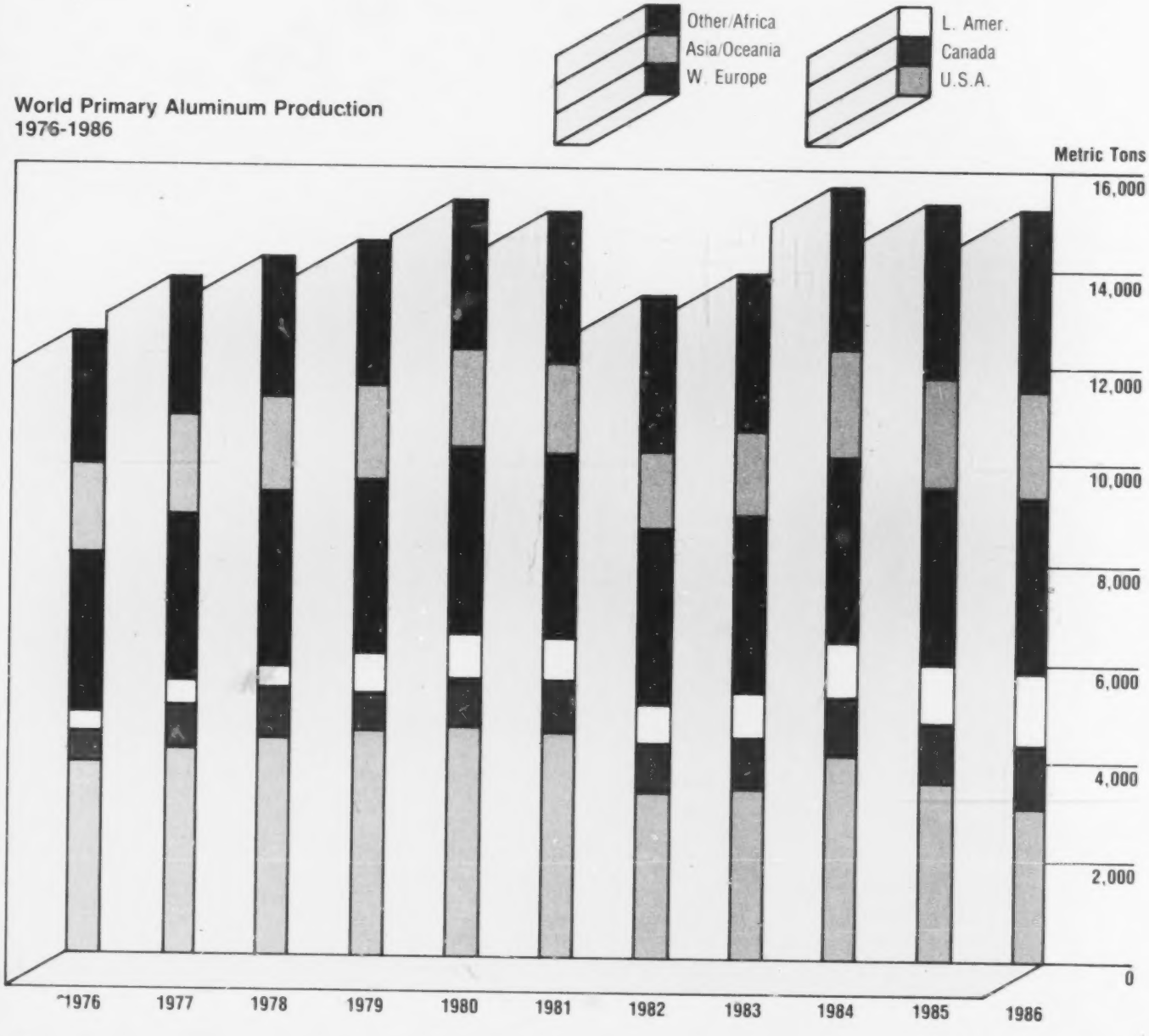
WORLD PRODUCTION DOWN 0.2 PERCENT

Estimated 1986 world production of primary aluminum totaled 15,314 thousand metric tons, down 0.2 percent from the revised estimate of 15,351 thousand tons in 1985 according to Bureau of Mines data.

Over the decade 1976-1986 world production increased 21.3 percent, an annual growth rate of 1.3 percent.

The United States accounted for 19.8 percent of the world's 1986 production while Europe accounted for 23.7 percent. The remaining 56.5 percent from Asia (6.7 percent), Canada (8.9 percent), South America (9.2 percent), Oceania (7.3 percent), Africa (3.6 percent), and others (20.7 percent).

World Primary Aluminum Production 1976-1986



World Primary Aluminum Production
1976-1986

Thousands of Metric Tons

Country	1986p	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
TOTAL WORLD(1)	15,314	15,351r	15,707r	13,908r	13,433r	15,079	15,383	14,555	14,131	13,779	12,622
AFRICA	550	509r	410r	420	500	473	437	400	342	376	347
Cameroon	85	86r	73	77	79	65	43	44	49	55	58
Egypt	175	209r	170r	140	141	134	120	102	101	89	59
Ghana	125	49r	—	42	174	190	188	169	112	153	152
South Africa	165	165r	167	161	106	84	87	86	81	78	78
NORTH AMERICA	4,399	4,782	5,326	4,444	4,339	5,605	5,722	5,377	5,407	5,091	4,490
Canada	1,360	1,282	1,227	1,091	1,065	1,116	1,068	820	1,049	973	633
United States	3,037	3,500	4,099	3,353	3,274	4,489	4,654	4,557	4,358	4,118	3,856
LATIN AMERICA	1,408	1,152r	1,047r	943	795	788	821	693	408	361	318
Argentina	150	140r	139r	133	138	134	133	119	49	50	44
Brazil	762	550r	455	401	299	256	261	239	186	167	139
Mexico	43	43	44	40	41	43	43	44	44	43	43
Suriname	29	23	23	34	43	41	55	64	55	58	46
Venezuela	424	396	386	335	274	314	328	228	74	44	46
EAST ASIA(1)	159	245	305	269	376	820	1,174	1,089	1,129	1,237	963
Japan	140	227	287	256	351	771	1,091	1,011	1,058	1,188	919
Korea, Republic of	19	18	18	13	15	18	18	22	20	18	18
Taiwan	—	—	—	—	10	31	64	56	51	30	25
SOUTH ASIA	870	905r	880	711	651	502	386	383	395	373	398
Bahrain	178	177	177	172	171	130	126	126	122	122	122
India	225	260r	269	204	217	213	185	211	214	179	210
Indonesia	220	217r	199	115	33	—	—	—	—	—	—
Iran	42	42	42	39	45	13	16	14	25	21	31
Turkey	50	54r	38	30	36	40	34	32	33	52	35
United Arab Emirates	155	155	155	151	149	106	25	—	—	—	—
EUROPE	3,642	3,586r	3,774r	3,580r	3,521	3,723	3,747	3,584	3,507	3,462	3,338
Austria	94	94	96r	94	94	94	94	93	92	92	89
France	310	293	342	361	390	436	432	396	391	399	385
Germany, Fed. Rep.	765	745	777	743	723	729	731	741	740	742	697
Greece	130	125r	136	136	135	146	146	141	144	130	134
Iceland	76	73r	80	76	75	74	73	73	73	74	65
Italy	243	221r	230	196	233	274	271	269	270	260	207
Netherlands	252	251r	249	235	251	262	259	258	261	241	256
Norway	712	712r	765r	713r	638	634	653	664	639	622	618
Spain	375	370	381	358	367	397	386	259	212	211	210
Sweden	80	84	83	82	79	83	82	82	82	83	83
Switzerland	65	73	79	76	75	82	86	83	80	80	78
United Kingdom	270	275	288	252	241	339	374	359	347	350	335
Yugoslavia	270	270	268	258	220	173	161	168	176	177	182
OCEANIA	1,116	1,092r	1,001	697	544	533	458	424	415	393	372
Australia	882	851	758	478	381	379	303	269	263	248	232
New Zealand	234	241r	243	219	163	154	155	154	152	145	140
OTHER	3,172	3,080r	2,964r	2,844	2,707r	2,635	2,638	2,605	2,529	2,488	2,397
China, P.R.(1)	410	410	400	400	380	350	360	363	363	349	318
Czechoslavakia(1)(2)	30	32	32	36	34	33	38	37	37	36	36
German D.R.(1)	60	60r	58	57	58	60	60	60	65	65	59
Hungary	74	74	74	74	74	74	73	72	72	72	71
Korea, Peop. Rep.	10	10	10	10	10	10	10	10	10	10	10
Poland(3)	48	47	46	44	43	66	95	96	100	104	103
Romania	240	247r	244r	223	208	242	241	217	213	209	203
U.S.S.R.(1)	2,300	2,200	2,100	2,000	1,900r	1,800	1,760	1,751	1,669	1,642	1,597

Detail may not add due to rounding.

(1) Estimated by the Bureau of Mines, U.S. Department of Interior.
(2) Includes secondary unalloyed ingot.
(3) Includes primary alloyed ingot.
r-revised.
p-preliminary.

SOURCE: Bureau of Mines, U.S. Department of Interior.
CONVERSION FACTOR: One metric ton = 2,204.6 pounds.

Aluminum Supply and Apparent Consumption—Selected Countries

PER CAPITA CONSUMPTION DOWN 5.9 PERCENT

Per capita aluminum consumption for those countries which provided both 1985 and 1986 data, decreased an average of 5.9 percent in 1986 as compared with 1985. Of the 30 countries which responded to the 1986 survey, 20 (66%) showed increased usage in 1986 while the remainder, 10 (33%) indicated decreased or steady usage.

The United States was again the largest user of aluminum on a per capita basis (57.8 pounds; 26.2 Kg.). Other large users were W. Germany (56.2 pounds; 25.5 Kg.) Japan (39.7 pounds; 18.0 Kg.), and Norway (40.6 pounds; 18.4 Kg.).

Per Capita Aluminum Consumption Formula

1 · Primary aluminum production
2 · Government stockpile adjustment
3 · Imports of ingot
4 · Imports of mill products (aluminum alloy weight)
5 · Recovery of secondary aluminum alloys (from domestic and imported scrap)
6 Exports of ingot
7 Exports of mill products (aluminum alloy weight)
8 Apparent aluminum consumption
9 · Beginning of year inventory
10 End of year inventory
11 · Inventory change
12 Aluminum consumption (with inventory change)
13 Mid-year population
14 Per capita consumption (Kg.) (without inventory change)
15 Per capita consumption (Kg.) (with inventory change)

The Aluminum Association, in conjunction with industry associations in foreign countries, and, in some instances appropriate government agencies, is developing a joint program to compile uniform statistical data showing total supply and apparent consumption. Total supply for an individual country consists of primary production, imports, and secondary recovery. Apparent consumption is equal to the sum of these sources of total supply less exports and inventory changes. Production of primary aluminum for the foreign countries is tabulated for the years 1976-1986 on page 45.

The tables on pages 48-61 show total supply and apparent consumption corresponding to the above format for the following countries:

Argentina
Australia
Austria
Bahrain
Belgium
Brazil
Cameroon
Canada
Denmark
Finland
France
Germany, F.R.
Greece
Iceland
Indonesia
Iran
Ireland
Israel
Italy
Japan
Korea, Rep.
Mexico
Netherlands
New Zealand
Nicaragua
Norway
Panama
Philippines
Portugal
El Salvador
Saudi Arabia
Singapore
South Africa
Spain
Sweden
Switzerland
Taiwan
Turkey
United Kingdom
United States
Venezuela

The format for compiling total supply and apparent consumption data is shown below.

In order to develop a basis for showing relative aluminum usage by country and to provide a measure of trend over time, per capita consumption data have been calculated for each country. For this purpose mid-year population estimates have been used. It is important to emphasize that these estimates are not the only way of measuring relative consumption data among countries. Obviously, the composition of a country's population, standard of living, industrialization, climate, availability and economies of other materials, and a number of other important considerations affect the per capita use of aluminum. The formula is used because it is simple and permits the Association to compile data for more countries, with their cooperation, than can be compiled using more detailed information.

When data for individual lines are not available or are not appropriate, they are omitted. Inventory changes cover suppliers' inventories only. Consumption estimates exclude changes in customer inventories.

The components of the formula are numbered and cross referenced to the country details on pages 41-61.

A summary of per capita consumption covering the years 1976-1986 for each of the countries is shown on page 47 in pounds.

Conversion factor: One metric ton = 2,204.6 pounds.

Per Capita Aluminum Consumption of Selected Countries 1976-1986

Pounds per person per year (a)

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
Argentina*	4.6	2.6	5.5	5.3	4.8	4.0	4.8	6.9	4.9	5.9	6.2
Australia*	38.1	39.8	36.6	33.8	36.7	41.4	38.9	37.6	32.5	31.3	31.0
Austria*	32.2	27.7	28.9	25.5	23.8	26.5	27.6	25.0	23.7	24.7	23.3
Bahrain*	9.7	23.8	22.0	18.9	10.8	13.2	20.3	27.5	15.1	22.5	23.7
Belgium	22.3	21.2	27.1	21.0	20.6	16.1	20.6	20.3	19.6	21.4	23.4
Brazil*	6.8	5.9	4.8	4.9	5.5	5.3	6.6	6.4	5.8	5.8	5.3
Cameroon	4.6	4.8	4.4	4.5	3.6	3.5	6.4	4.7	3.9	5.3	8.4
Canada*	41.9	44.7	43.4	32.0	37.2	36.1	35.5	37.1	35.7	31.5	30.8
Denmark	21.2	20.4	21.5	30.2	30.5	27.3	27.6	31.8	32.2	28.0	27.4
Finland	na	7.2	7.6	11.5	14.6	14.1	14.3	16.5	12.0	19.3	20.6
France*	29.6	27.1	26.1	27.2	27.3	26.0	30.1	28.1	25.4	26.0	26.5
Germany, F.R.*	56.2	54.7	49.1	48.1	43.0	44.8	48.6	48.6	42.9	41.8	42.6
Greece	12.3	8.5	11.4	10.6	10.6	13.0	13.0	9.4	8.7	9.0	8.1
Iceland	18.1	17.3	19.3	27.8	23.4	34.1	21.9	20.4	15.9	18.9	18.2
Indonesia	na	na	na	na	na	na	na	0.6	0.6	0.6	0.5
Iran*	na	na	na	na	na	na	na	na	na	4.3*	4.2*
Ireland	11.0	10.0	11.3	8.3	8.8	9.1	9.6	10.9	10.6	7.9	9.1
Israel	na	na	na	na	na	na	na	na	na	9.4	9.9
Italy*	32.2	30.1	29.6	29.3	27.1	27.6	32.4	28.0	24.7	24.3	21.6
Japan*	39.7	45.3	39.7	44.1	42.5	41.9	45.6	42.8	42.1r	35.4	35.8
Korea, Republic of	na	9.9	9.9r	9.3	7.5	6.8	4.2	7.1	7.1	5.3	3.7
Mexico*	2.6	4.4	3.5	2.5	4.9	6.5	5.6	4.9	4.1	2.6	3.4
The Netherlands*	30.6	23.8	27.6	23.6	25.4	20.1	27.2	26.0	23.0*	25.1*	29.1*
New Zealand*	22.5	22.2	20.8	18.4	15.4	20.5	17.2	19.0	17.1	17.6	20.7
Nicaragua	na	na	na	na	na	na	na	na	0.5	1.3	1.0
Norway*	40.6	45.0	48.1	29.4	49.8	41.7	50.0	53.1	46.1	50.9	55.8
Panama	1.8	1.7	4.9	3.2	1.8	2.2	2.0	2.0	1.5	1.8	2.6
Philippines, Rep. of	na	0.4r	0.5	0.8	1.1	0.4	0.8	1.5	0.8	1.0	1.0
Portugal	10.0	8.4r	6.8r	9.9r	11.0r	11.0r	8.5	7.6	8.6	6.9	5.6
El Salvador	0.4	0.1	0.5	1.2	0.5	0.6	0.4	1.0	1.0	0.4	1.1
Saudi Arabia	13.0	30.1	19.8	46.1	9.4	25.1	24.8	19.0	17.5	14.1	5.2
Singapore	25.6	25.8	26.1	22.9	23.0	25.3	20.1	20.4	15.0	15.1	12.5
South Africa*	9.3	9.3	9.4	9.2	9.0	10.0	9.9	5.8	5.1	5.2	6.0
Spain*	12.6	9.9r	9.7	11.8	12.1	11.3	14.2	12.8	12.5	14.1	13.4
Sweden*	45.4	42.5	43.9	41.1	38.8	34.2	34.4	36.9	32.6	34.5	40.8
Switzerland*	44.8	42.2	40.1	33.0	33.3	34.0	37.7	31.4	29.8	28.6	27.9
Taiwan, Republic of China*	na	17.1	12.6	19.6	13.7	14.5	13.4	15.0	12.8	10.5	8.7
Turkey	9.0	7.9	6.9	6.6	5.7	4.4	2.1	2.4	2.5	4.3	3.4
United Kingdom	22.7	22.1	23.6	21.9	20.3	20.7	21.6	22.1	26.6	26.4	25.1
United States*	57.8	58.7	59.3	57.7	51.0	55.2	56.8	65.8	65.9	60.3	57.1
Venezuela*	14.8	10.4r	13.2r	14.1r	13.9	9.0	15.2	14.8	11.3	9.7	8.1

Adjusted for inventory change
r — Revised
na — Not available at publication time
e — Estimated

(a)—See individual country tables for kilogram measures.

Per Capita Aluminum Consumption

ARGENTINA, REPUBLIC OF

Thousands of Metric Tons

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	147.6	136.2	133.7	132.8	137.5	134.1	133.1	118.4	49.4	52.4	43.1
3. + Imports of Ingot	—	—	—	—	—	—	—	—	—	0.1	20.2
4. + Imports of Mill Products	1.0	1.0r	0.9	1.1	10.5	5.1	4.0	1.4	0.5	0.3	0.1
5. + Recovery of Secondary	6.5	3.7r	7.5	7.0	6.0	5.0	7.0	8.0	8.0	8.8	14.4
6. − Exports of Ingot	34.8	66.1	30.1	43.8	67.6	88.2	63.4	31.3	7.5	—	—
7. − Exports of Mill Products	60.6	45.1	29.7	16.5	16.4	11.3	8.9	4.1	10.2	3.4	1.1
8. = Apparent Aluminum Consumption	59.7	29.7r	82.3	80.6	70.0	44.7	71.8	92.4	40.3	58.2	76.7
11. + Inventory Change	−5.5	−7.1	6.5	8.6	7.0	−6.8	10.0	6.0	−18.6	−12.0	4.1
12. = Aluminum Consumption	65.2	36.8r	75.8	72.0	63.0	51.5	61.8	86.4	58.9	70.2	72.7
13. Mid-Year Population (Millions)	30.6	30.6	30.1	29.6	29.2	28.7	28.24	27.79	26.5	26.1	25.7
14. Per Capita Consumption (kg)(1)	1.9	1.0	2.7	2.7	2.4	1.6	2.5	3.3	1.5	2.2	3.0
15. Per Capita Consumption (kg)(2)	2.1	1.2	2.5	2.4	2.2	1.8	2.2	3.1	2.2	2.7	2.8

NOTES
(1) Without Inventory Change
(2) Adjusted for Inventory Change

Source: Ministerio de Defensa (COPEDESMEL)

AUSTRALIA

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	875.0	851.2	756.7	474.1	380.2	378.7	302.5	273.2	266.4	215.6	231.2
3. + Imports of Ingot	0.1	0.6	0.5	4.5	13.2	8.4	8.0	3.5	0.2	—	—
4. + Imports of Mill Products	8.4	10.2	8.7	6.4	13.1	14.4	10.7	8.1	3.6	4.1	4.4
5. + Recovery of Secondary	30.0	45.6	43.3	37.7	40.7	44.4	38.0	30.5	24.4	24.6	27.3
6. − Exports of Ingot	588.0	577.2	477.3	215.8	185.6	122.6	35.6	63.1	76.3	68.7	70.5
7. − Exports of Mill Products	56.4	54.0	58.8	49.5	32.6	25.4	18.4	16.1	4.8	3.3	1.4
8. = Apparent Aluminum Consumption	269.1	276.4	273.1	257.4	229.1	297.9	305.3	236.1	213.6	172.4	191.1
11. + Inventory Change	−6.5	−8.5	14.6	21.7	−23.7	−19.0	47.4	−9.7	3.8	5.1	1.0
12. = Aluminum Consumption	275.6	284.9	258.5	235.8	252.7	316.9	257.9	245.8	209.7	167.3	190.1
13. Mid-Year Population (Millions)	16.0	15.8	15.5	15.4	15.2	14.9	14.6	14.4	14.2	14.1	13.5
14. Per Capita Consumption (kg)(1)	16.8	17.5	17.6	16.7	15.1	20.0	20.9	16.4	15.0	12.2	14.2
15. Per Capita Consumption (kg)(2)	17.3	18.1	16.6	15.3	16.6	21.3	17.7	17.1	14.8	11.9	14.1

NOTES
(1) Without Inventory Change
(2) Adjusted for Inventory Change

Source: Aluminium Development Council—Australia

AUSTRIA

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	92.5	94.1	95.8	94.2	93.9	94.2	94.4	92.7	91.3	91.8	88.6
3. + Imports of Ingot	78.9	65.4	61.4	40.2	38.7	33.2	35.2	30.7	14.9	19.2	21.0
4. + Imports of Mill Products	54.8	54.9	52.3	48.5	42.4	37.6	39.2	36.8	29.9	29.0	24.4
5. + Recovery of Secondary	24.7	21.1	21.6	16.1	14.2	13.8	14.3	8.7	9.3	10.6	8.5
6. Exports of Ingot	28.3	26.7	25.5	25.6	25.6	25.0	9.8	10.3	11.7	8.7	8.6
7. Exports of Mill Products	105.3	110.1	100.0	101.4	78.6	69.1	66.4	74.3	67.7	56.3	60.1
8. Apparent Aluminum Consumption	117.3	98.7	105.6	72.0	85.0	84.6	107.0	84.3	66.0	85.6	73.8
11. + Inventory Change	7.1	4.5	7.0	14.7	3.8	−5.4	13.0	−0.6	−14.6	1.8	5.5
12. = Aluminum Consumption	110.2	94.2	98.6	86.7	81.2	90.0	94.0	84.9	80.6	83.8	79.4
13. Mid-Year Population (Millions)	7.6	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
14. Per Capita Consumption (kg)(1)	15.5	13.2	14.1	9.6	11.3	11.3	14.3	11.2	8.8	11.4	9.8
15. Per Capita Consumption (kg)(2)	14.6	12.6	13.1	11.6	10.8	12.0	12.5	11.3	10.8	11.2	10.6

NOTES
(1) Without Inventory Change
(2) Adjusted for Inventory Change

Source: Fachverband der Metallindustrie Osterreichs

Detail may not add to totals due to rounding

BAHRAIN

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	176.6	175.5	175.8	171.7	171.0	142.0	126.1	127.1	123.1	124.1	123.1
5. + Recovery of Secondary	1.5	—	—	—	1.5	—	—	—	—	—	—
6. – Exports of Ingot	199.9	133.0	168.3	190.5	157.0	83.0	78.0	131.1	134.1	118.0	126.1
7. – Exports of Mill Products	25.0e	15.2	13.2	18.0	12.0	15.0	17.0	6.0	5.0	3.0	3.0
8. = Apparent Aluminum Consumption	–46.8e	27.3	–5.7	–36.8	3.5	44.0	31.1	–10.0	–16.0	3.1	–6.0
9. + Beginning Inventory	64.7	41.9	51.6	91.7	90.0	48.0	20.0	34.0	52.1	52.1	33.8
10. – Ending Inventory	16.1	64.7	41.9	51.6	91.7	90.0	48.0	20.0	34.0	52.1	52.1
11. = Inventory Change	–48.6	22.8	–9.7	–40.1	1.7	42.0	27.9	–14.0	–18.1	0.0	18.2
12. = Aluminum Consumption	1.8e	4.5	4.0	3.3	1.8	2.0	3.2	4.0	2.1	3.1	–24.2
13. Mid-Year Population (Millions)	0.411	0.400r	0.400	0.384	0.371	0.351	0.335	0.320	0.305	0.293	0.279
14. = Per Capita Consumption (kg)(1)	–113.8	68.3r	–14.3	–95.8	9.4	125.4	92.9	–31.2	–52.3	10.5	–21.5
15. = Per Capita Consumption (kg)(2)	4.4e	11.3r	10.0	8.6	4.9	5.7	9.5	12.5	6.8	10.5	–86.8

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change
e—Estimated

Source: Aluminium Bahrain B.S.C.

BELGIUM

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
3. + Imports of Ingot	307.4	307.9	311.0	289.7	267.4	245.0	252.5	252.8	266.8	238.4	258.1
4. + Imports of Mill Products	109.9	95.7	93.8	90.5	86.9	62.9	64.9	87.1	76.8	75.3	78.3
5. + Recovery of Secondary	—	—	—	—	—	—	—	—	1.0	3.0	2.6
6. – Exports of Ingot	24.9	23.0	10.3	17.3	13.8	29.7	19.6	10.8	10.2	13.1	14.2
7. – Exports of Mill Products	289.4	286.5r	280.6	269.1	248.5	206.3	205.1	245.4	232.3	219.4	210.1
8. = Apparent Aluminum Consumption	103.0	94.1r	113.9	93.8	92.0	71.9	92.7	83.7	102.2	84.3	114.8
13. Mid-Year Population (Millions)	9.9	9.9	9.9	9.9	9.9	9.8	9.9	9.8	9.8	9.8	9.8
14. = Per Capita Consumption (kg)(1)	10.4	9.5	11.6	9.5	9.3	7.3	9.4	8.5	10.4	8.6	11.7

NOTES:
(1) Without Inventory Change

Source: Federation des Enterprises de Metaux Non Ferreux

BRAZIL

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	757.3	549.4	455.0	400.7	299.0	256.4	260.6	238.1	186.4	167.1	139.2
3. + Imports of Ingot	1.1	2.6	4.6	3.0	10.8	28.3	46.7	51.8	60.4	82.8	78.1
4. + Imports of Mill Products	1.8	3.8	5.0	2.8	3.9	8.7	22.3	27.3	14.8	29.3	15.4
5. + Recovery of Secondary	60.1	52.7	47.2	45.0	37.8	37.3	46.1	53.8	49.2	33.5	28.0
6. – Exports of Ingot	323.5	179.1r	148.0	116.3	6.7	2.2	—	—	—	—	—
7. – Exports of Mill Products	33.5	36.0r	57.3	53.3	11.7	18.6	11.5	8.6	3.9	2.8	1.8
8. = Apparent Aluminum Consumption	463.4	393.4r	306.5	281.9	333.1	309.9	364.2	362.4	306.9	309.9	258.9
11. + Inventory Change	34.8	37.6r	20.1r	–7.9r	21.2	20.8	10.9	24.2	6.4	17.6	—
12. = Aluminum Consumption	428.5	355.8r	286.4r	289.8r	311.9	289.1	353.3	338.2	300.5	292.3	258.9
13. Mid-Year Population (Millions)	138.4	135.6	132.6	129.6	126.8	124.0	119.1	116.3	113.5	110.8	108.1
14. = Per Capita Consumption (kg)(1)	3.3	2.9	2.3	2.2	2.6	2.5	3.1	3.1	2.7	2.8	2.4
15. = Per Capita Consumption (kg)(2)	3.1	2.6	2.2	2.2	2.5	2.3	3.0	2.9	2.6	2.6	2.4

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change
r—Revised

Source: Associacao Brasileira do Aluminio

Per Capita Aluminum Consumption—Continued

CAMEROON

Thousands of Metric Tons

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	81.1	81.6	73.1	77.4	78.9	65.4	43.0	44.6	41.3	46.2	48.7
3. + Imports of Ingot	—	—	—	—	—	—	—	0.8	0.1	—	—
4. + Imports of Mill Products	—	0.1	—	—	0.9	0.9	0.9	0.4	0.3	1.2	1.8
6. − Exports of Ingot	53.0	51.9	49.4	51.1	55.4	44.5	13.3	20.2	15.3	23.9	20.8
7. − Exports of Mill Products	6.8	8.9	6.7	9.8	10.7	7.0	5.1	10.0	10.1	5.4	4.4
8. = Apparent Aluminum Consumption	21.3	20.9	17.0	16.5	13.7	14.8	25.5	15.6	16.2	18.1	25.3
11. + Inventory Change	0.3	0.2	−1.1	8.6	−0.5	1.5	1.8	−1.7	2.3	−0.9	0.3
12. = Aluminum Consumption	21.0	20.7	18.1	7.9	14.2	13.2	23.7	17.3	14.0	19.0	25.0
13. Mid-Year Population (Millions)	10.2	9.61	9.16	8.87	8.65	8.50	8.25	8.06	7.91	7.91	6.53
14. Per Capita Consumption (kg)(1)	2.1	2.2	1.9	1.9	1.6	1.7	3.1	1.9	2.1	2.3	3.9
15. Per Capita Consumption (kg)(2)	2.1	2.2	2.0	0.9	1.6	1.6	2.9	2.1	1.8	2.4	3.8

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change

Source: Societe de Vante de l'Aluminium Pechiney

CANADA

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	1,355.0	1,282.0	1,223.0	1,094.0	1,070.0	1,118.1	1,074.0	863.3	1,050.5	976.4	631.0
3. + Imports of Ingot	65.0	60.0	39.0	31.0	24.0	14.3	9.9	24.0	11.5	20.8	22.6
4. + Imports of Mill Products	179.0	174.0	188.0	122.0	110.0	125.1	118.1	144.2	107.7	97.0	93.4
5. + Recovery of Secondary	78.0	74.0	70.0	56.0	50.0	65.0	65.1	84.5	74.8	48.3	42.6
6. − Exports of Ingot	1,164.0	1,051.0	834.0	925.0	896.0	725.5	784.7	550.5	862.6	655.3	507.5
7. − Exports of Mill Products	82.0	78.0	100.0	65.0r	42.0	40.5	39.6	36.1	39.8	43.5	28.2
8. = Apparent Aluminum Consumption	431.0	461.0	586.0	313.0r	316.0	556.6	442.8	529.3	342.2	443.6	253.8
11. + Inventory Change	−57.0	−54.0	92.0r	−48.0r	−99.0r	160.0	57.9	130.4	−38.2	111.3	−68.4
12. = Aluminum Consumption	488.0	515.0	494.0r	361.0r	415.0r	396.5	384.9	399.0	380.4	332.3	322.2
13. Mid-Year Population (Millions)	25.7	25.4	25.1	24.9	24.6	24.2	23.9	23.7	23.5	23.3	23.1
14. Per Capita Consumption (kg)(1)	16.8	18.2	23.3	12.6r	12.8	23.0	18.5	22.3	14.6	19.0	11.0
15. Per Capita Consumption (kg)(2)	19.0	20.3	19.7r	14.5r	16.9r	16.4	16.1	16.8	16.2	14.3	13.9

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change
r—Revised

Source: Aluminum Company of Canada, Ltd.

DENMARK

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
3. + Imports of Ingot	39.6	37.6	34.1	28.0	25.1	21.2	24.2	22.5	18.8	15.8	13.2
4. + Imports of Mill Products	88.6	80.0r	65.9	62.5	43.9	40.5	45.4	49.8	58.1	54.0	56.8
5. + Recovery of Secondary	na	na	na	28.0	32.3	30.3	24.9	31.1	27.7	20.5	14.0
6. − Exports of Ingot	30.8	28.9r	25.5	24.0	20.1	20.1	18.9	21.5	17.2	13.6	9.4
7. − Exports of Mill Products	48.5	45.8r	24.7	24.5	10.4	8.4	11.4	8.3	12.5	12.1	11.5
8. = Apparent Aluminum Consumption	49.0	43.0	49.8	70.0r	70.8	63.5	64.2	73.6	74.8	64.6	63.0
13. Mid-Year Population (Millions)	5.11	5.11	5.11	5.11	5.12	5.12	5.12	5.12	5.10	5.09	5.07
14. Per Capita Consumption (kg)(1)	9.6	8.4r	9.7	13.7	13.8	12.4	12.5	14.4	14.7	12.7	12.4

NOTES:
(1) Without Inventory Change
r—Revised

Source: Danmarks Statistik

Detail may not add to totals due to rounding.

FINLAND

		1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
3.	+ Imports of Ingot	21.6	20.3	20.7	26.3	27.2	28.8	26.7	24.9	21.7	28.6	24.5
4.	+ Imports of Mill Products	na	22.5r	24.5	24.0	22.4	21.9	28.8	26.6	20.3	29.6	31.6
5.	+ Recovery of Secondary	na	6.5	6.8	5.4	6.8	6.5	6.6	7.6	5.5	9.3	7.3
6.	– Exports of Ingot	17.0	16.2r	13.6	10.7	6.3	4.6	3.9	1.3	2.7	3.3	1.2
7.	– Exports of Mill Products	na	17.5	21.5	19.7	18.1	22.0	27.1	22.3	19.0	22.7	18.0
8.	= Apparent Aluminum Consumption	na	15.6r	16.9	25.3	32.0	30.6	31.1	35.7	25.8	41.5	44.2
13.	Mid-Year Population (Millions)	na	4.90	4.88	4.86	4.83	4.80	4.78	4.77	4.75	4.70	4.70
14.	= Per Capita Consumption (kg)[1]	na	3.2	3.5	5.2	6.6	6.4	6.5	7.5	5.4	8.8	9.4

NOTES:
(1) Without Inventory Change

Source: Central Statistical Office of Finland

FRANCE

		1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1.	+ Primary Aluminum Production	321.8	293.2	341.5	360.9	390.4	435.6	431.9	395.1	391.4	398.8	385.1
3.	+ Imports of Ingot	428.1	396.1	365.0	394.6	352.0	300.4	332.4	315.3	291.1	275.3	251.4
4.	+ Imports of Mill Products	248.2	206.3	201.8	206.8	204.4	190.3	209.9	186.3	144.0	141.6	169.8
5.	+ Recovery of Secondary	180.3	170.1	174.0	170.0	153.7	169.8	170.0	165.7	160.8	152.5	137.0
6.	– Exports of Ingot	143.3	115.4	146.6	160.7	182.7	190.5	177.4	157.6	166.4	165.8	149.2
7.	– Exports of Mill Products	278.1	275.5	280.8	294.6	263.0	248.5	230.0	259.9	214.6	188.2	161.5
8.	= Apparent Aluminum Consumption	756.9	674.8	654.9	677.0	654.8	657.2	736.9	645.0	606.2	614.2	632.5
11.	+ Inventory Change	15.4	0.8	6.2	5.0	–18.1	22.0	3.8	–36.2	–6.1	–10.7	–3.8
12.	= Aluminum Consumption	741.5	674.0	648.7	672.0	672.9	635.1	733.1	681.2	612.3	624.9	636.4
13.	Mid-Year Population (Millions)	55.2	54.9	54.7	54.4	54.3	53.9	53.7	53.5	53.1	53.0	52.9
14.	= Per Capita Consumption (kg)[1]	13.7	12.3	12.0	12.4	12.1	12.2	13.7	12.1	11.4	11.6	12.0
15.	= Per Capita Consumption (kg)[2]	12.4	12.3	11.9	12.4	12.4	11.8	13.7	12.7	11.5	11.8	12.0

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change
r—Revised

Source: Societe de Vante de l'Aluminium Pechiney

GERMANY, FEDERAL REPUBLIC OF

		1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1.	+ Primary Aluminum Production	763.7	745.4r	777.2	743.3	722.8	728.9	730.7	741.9	739.6	741.8	697.1
3.	+ Imports of Ingot	784.0	721.6r	722.7	592.1	565.3	500.0	608.8	511.5	434.0	440.4	417.2
4.	+ Imports of Mill Products	327.7	322.7r	304.7	299.0	262.3	240.1	284.1	262.3	205.5	213.8	200.1
5.	+ Recovery of Secondary	590.3	567.1r	480.8	458.9	398.1	413.4	425.0	425.4	394.4	354.2	320.8
6.	– Exports of Ingot	301.7	281.7	294.3	321.1	255.4	253.0	223.7	247.8	271.6	199.1	281.4
7.	– Exports of Mill Products	563.4	560.7r	558.3	512.9	449.7	406.9	387.9	395.5	348.2	301.9	274.6
8.	= Apparent Aluminum Consumption	1,600.6	1,514.4r	1,432.8	1,259.3	1,243.3	1,222.6	1,437.1	1,297.7	1,153.7	1,249.2	1,079.2
9.	+ Beginning Inventory	254.9	253.5	302.7	221.3	269.3	240.1	325.9	269.7	229.6	315.4	205.3
10.	– Ending Inventory	294.9	254.9r	253.5	302.7	221.3	269.3	240.1	325.9	269.7	229.6	315.4
11.	= Inventory Change	40.0	1.4r	49.2	–81.4	48.0	–29.2	85.8	–56.2	–40.1	85.7	–110.0
12.	= Aluminum Consumption	1,560.6	1,513.0r	1,383.6	1,340.7	1,195.3	1,251.8	1,351.3	1,353.9	1,193.8	1,163.5	1,189.2
13.	Mid-Year Population (Millions)	61.1	61.0	61.2	61.4	61.3	61.7	61.3	61.4	61.3	61.4	61.5
14.	= Per Capita Consumption (kg)[1]	26.2	24.8r	23.4	20.5	20.3	19.8	23.4	21.1	18.8	20.3	17.5
15.	= Per Capita Consumption (kg)[2]	25.5	24.8r	22.6	21.8	19.5	20.3	22.0	22.1	19.5	18.9	19.3

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change
r—Revised

Source: Aluminium-Zentrale e.V. and German Metals Federation

Detail may not add to totals due to rounding.

Per Capita Aluminum Consumption—Continued

GREECE

Thousands of Metric Tons

		1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1	+ Primary Aluminum Production	126.3a	123.4a	136.0	136.2	134.9	146.1	145.6	140.8	145.6	131.4	134.3
3	+ Imports of Ingot	7.2	3.6	6.5	2.1	4.0	2.8	0.1	0.3	0.3	4.5	3.6
4	+ Imports of Mill Products	7.8	4.7	5.5	5.3	4.1	4.4	3.9	3.5	3.0	3.8	2.5
6	− Exports of Ingot	45.8	43.2	48.4	55.1	66.6	69.2	60.2	74.0	85.2	77.5	88.9
7	− Exports of Mill Products	39.4	49.8	48.5	40.6	29.5	26.9	32.7	30.0	26.5	24.2	18.0
8	= Apparent Aluminum Consumption	56.4e	38.7e	51.1	47.8	46.9	57.2	56.7	40.6	37.2	38.0	33.6
13	Mid-Year Population (Millions)	10.0	9.9	9.9	9.9	9.8	9.7	9.6	9.5	9.4	9.3	9.2
14	= Per Capita Consumption (kg)[1]	5.6e	3.9e	5.2	4.9	4.8	5.9	5.9	4.3	4.0	4.1	3.6

NOTES
(1) Without Inventory Change
r—Revised
e—Estimated
a—Source: World Bureau of Metal Statistics

Source: National Statistical Service of Greece and Societe de Vante de l'Aluminium Pechiney

ICELAND

		1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1	+ Primary Aluminum Production	78.2	75.4	80.4	76.1	75.2	73.7	73.1	71.0	73.8	70.7	65.2
4	+ Imports of Mill Products	2.0	1.9	2.1	3.0	2.5	2.9	2.3	1.8	2.9	1.9	1.8
7	− Exports of Mill Products	76.3	72.1	79.9	106.9	61.5	64.1	67.4	77.2	75.8	74.2	77.6
8	= Apparent Aluminum Consumption	3.9	5.2	2.6	−27.8	16.2	12.5	8.0	−4.4	0.8	−1.6	−10.5
9	+ Beginning Inventory	6.8	3.5	3.0	33.8	20.1	10.5	4.8	11.3	12.0	16.1	27.9
10	− Ending Inventory	8.7	6.8	3.5	3.0	33.8	20.1	10.5	4.8	11.3	12.0	15.5
11	= Inventory Change	1.9	3.3	0.5	−30.8	13.7	9.6	5.7	−6.5	−0.6	−4.1	−12.4
12	= Aluminum Consumption	2.0	1.9	2.1	3.0	2.5	2.9	2.3	2.2	1.5	2.4	1.9
13	Mid-Year Population (Millions)	0.244	0.242	0.240	0.238	0.235	0.229	0.228	0.226	0.223	0.222	0.220
14	= Per Capita Consumption (kg)[1]	16.0	21.5	10.8	−116.8	68.9	54.6	35.1	−19.3	3.7	−7.4	−47.8
15	= Per Capita Consumption (kg)[2]	8.2	7.9	8.7	12.6	10.6	12.7	10.1	9.6	6.5	11.0	8.7

NOTES
(1) Without Inventory Change
(2) Adjusted for Inventory Change

Source: Icelandic Aluminum Co. Ltd.

INDONESIA

		1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
3	+ Imports of Ingot	na	na	na	na	na	na	na	15.2	12.2	11.7	8.4
4	+ Imports of Mill Products	na	na	na	na	na	na	na	25.3	21.8	22.0	20.9
5	+ Recovery of Secondary	na	na	na	na	na	na	na	—	*	*	*
7	− Exports of Mill Products	na	na	na	na	na	na	na	0.2	0.1	0.2	0.2
8	= Apparent Aluminum Consumption	na	na	na	na	na	na	na	40.3	33.9	33.5	29.1
13	Mid-Year Population (Millions)	na	na	na	na	na	na	na	138.0	135.3	132.6	130.2
14	= Per Capita Consumption (kg)[1]	na	na	na	na	na	na	na	0.3	0.3	0.3	0.2

NOTES
(1) Without Inventory Change
na—Not received at publication time
**—Less than 50 metric tons*

Source: Department of Mines and Energy, Indonesia

Detail may not add to totals due to rounding

IRAN

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	na	na	na	na	na	na	na	na	na	21.0	30.7
3. + Imports of Ingot	na	na	na	na	na	na	na	na	na	13.0	10.0
4. + Imports of Mill Products	na	na	na	na	na	na	na	na	na	17.0	19.0
5. + Recovery of Secondary	na	na	na	na	na	na	na	na	na	5.0	6.5
6. – Exports of Ingot	na	na	na	na	na	na	na	na	na	—	—
7. – Exports of Mill Products	na	na	na	na	na	na	na	na	na	—	—
8. = Apparent Aluminum Consumption	na	na	na	na	na	na	na	na	na	56.0	66.1
9. + Beginning Inventory	na	na	na	na	na	na	na	na	na	12.6	10.6
10. – Ending Inventory	na	na	na	na	na	na	na	na	na	3.0	12.6
11. = Inventory Change	na	na	na	na	na	na	na	na	na	– 9.6	2.0
12. = Aluminum Consumption	na	na	na	na	na	na	na	na	na	65.6	64.1
13. Mid-Year Population (Millions)	na	na	na	na	na	na	na	na	na	33.5	34.0
14. = Per Capita Consumption (kg)(1)	na	na	na	na	na	na	na	na	na	1.7	1.9
15. = Per Capita Consumption (kg)(2)	na	na	na	na	na	na	na	na	na	2.0	1.9

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change

Source: Industrial Development and Renovation Organization of Iran

IRISH REPUBLIC

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
3. + Imports (1)	49.0	42.3	42.4r	36.2	30.8	28.6	31.2	29.8	25.5	20.7	20.8
6. – Exports (1)	31.3	26.2	24.2r	23.0	16.9	14.5	16.3	13.0	9.6	9.4	7.5
8. = Apparent Aluminum Consumption	17.7	16.1	18.2r	13.2	13.9	14.1	14.9	16.8	15.9	11.2	13.2
13. Mid-Year Population (Millions)	3.54	3.56	3.54	3.51	3.48	3.40	3.40	3.40	3.30	3.20	3.20
14. = Per Capita Consumption (kg)(2)	5.0	4.5	5.1r	3.8	4.0	4.1	4.4	4.9	4.8	3.5	4.1

NOTES:
(1) Includes ingot and mill products
(2) Without Inventory Change
r—Revised

Source: Central Statistics Office, Dublin

ISRAEL

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
3 + Imports of Ingot	na	na	na	na	na	na	na	na	na	17.0	14.5
4 + Imports of Mill Products	na	na	na	na	na	na	na	na	na	11.0	13.7
5 + Recovery of Secondary	na	na	na	na	na	na	na	na	na	1.0	1.0
6 – Exports of Ingot	na	na	na	na	na	na	na	na	na	4.0	5.2
7 – Exports of Mill Products	na	na	na	na	na	na	na	na	na	9.5	8.0
8 = Apparent Aluminum Consumption	na	na	na	na	na	na	na	na	na	15.4	16.1
13 Mid-Year Population (Millions)	na	na	na	na	na	na	na	na	na	3.6	3.6
14 = Per Capita Consumption (kg)(1)	na	na	na	na	na	na	na	na	na	4.3	4.5

NOTES:
(1) Without Inventory Change
na—Not received at publication time

Source: The Israel Aluminium Association

Detail may not add to totals due to rounding.

Per Capita Aluminum Consumption—Continued

ITALY

Thousands of Metric Tons

		1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1	+ Primary Aluminum Production	242.6	224.1	230.2	195.7	232.9	273.8	271.2	269.1	279.8	260.1	206.5
3	+ Imports of Ingot	347.7	319.9	291.8	254.5	211.2	208.8	294.8	236.6	190.5	195.5	196.4
4	+ Imports of Mill Products	125.2	109.7	106.1r	110.3	83.3	81.6	111.6	90.2	60.7	59.0	49.4
5	+ Recovery of Secondary	301.0	282.0	283.0r	333.0	283.0	287.0	298.0	258.0	238.0	237.0	205.9
6	− Exports of Ingot	34.3	43.8	32.2	41.3	54.1	49.8	11.8	22.4	69.3	24.2	9.4
7	− Exports of Mill Products	105.9	103.0	94.0r	112.2	100.9	93.8	86.4	109.9	105.7	86.8	83.2
8	= Apparent Aluminum Consumption	876.3	788.9	784.9r	740.0	655.4	707.6	877.4	721.6	585.0	640.5	565.5
11	+ Inventory Change	40.0	9.2	19.8r	−13.1	−38.0	4.8	57.3	10.3	−38.0	32.4	9.6
12	= Aluminum Consumption	836.3	779.7	765.1r	753.1	693.5	702.8	820.1	711.2	623.0	608.1	555.9
13	Mid-Year Population (Millions)	57.2	57.1	57.0	56.8	56.3	56.1	55.9	55.8	55.7	55.4	56.2
14	= Per Capita Consumption (kg)[1]	15.3	13.8	13.8r	13.0	11.6	12.6	15.7	12.9	10.5	11.6	10.1
15	= Per Capita Consumption (kg)[2]	14.6	13.7	13.4r	13.3	12.3	12.5	14.7	12.7	11.2	11.0	9.9

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change
r— Revised

Source: Associazione Nazionale Industrie Metalli Non Ferrosi

JAPAN

		1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1	+ Primary Aluminum Production	148.4	231.3	291.1	258.6	355.1	776.8	1,095.7	1,014.2	1,061.8	1,192.9	923.3
2	+ Stockpile Adjustment	6.2	108.8	22.0	−63.5	−60.2	−22.0	= m	22.0	−12.3	9.5	9.5
3	+ Imports of Ingot	1,366.0	1,575.5	1,347.8	1,603.7	1,446.6	1,129.3	910.1	748.4	740.2	533.8	430.1
4	+ Imports of Mill Products	33.1	32.6	39.0	33.6	27.6	30.0	44.9	32.1	26.9	21.7	20.8
5	+ Secondary Recovery	838.7	803.4	692.8	700.0	560.5	550.1	563.0	476.1	494.4	391.7	296.2
6	− Exports of Ingot	2.0	2.2	2.3	1.7	6.7	12.2	7.6	8.0	54.6	99.6	78.7
7	− Exports of Mill Products	224.6	243.9	228.1r	197.0	154.9	113.9	73.0	98.4	148.5	86.6	66.2
8	= Apparent Aluminum Consumption	2,165.8	2,505.5	2,162.3r	2,333.7	2,167.9	2,338.1	2,533.1	2,186.5	2,107.8	1,963.3	1,534.9
9	+ Beginning Inventory	142.5	125.4	128.9	185.4	308.0	210.8	105.5	171.3	258.2	122.1	401.3
10	− Ending Inventory	118.5	142.5	125.4	128.9	185.4	308.0	210.8	105.5	171.3	258.2	122.1
11	− Inventory Change	24.0	17.1	−3.5	−56.5	−122.6	97.2	105.3	−65.8	−86.9	136.1	−279.2
12	= Aluminum Consumption	2,189.8	2,488.4	2,165.8r	2,390.2	2,290.5	2,241.0	2,427.7	2,252.3	2,194.7	1,827.3	1,814.1
13	Mid-Year Population (Millions)	121.7	121.0	120.2	119.5	118.8	117.9	117.1	116.1	114.9	113.9	112.4
14	= Per Capita Consumption (kg)[1]	17.8	20.7	18.0r	19.5	18.2	19.8	21.6	18.8	18.3	17.2	13.7
15	= Per Capita Consumption (kg)[2]	18.0	20.6	18.0r	20.0	19.3	19.0	20.7	19.4	19.1	16.0	16.1

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change
r—Revised

Source: Japan Aluminium Federation

KOREA, REPUBLIC OF

		1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1	+ Primary Aluminum Production	na	17.1	17.1	12.6	14.8	17.2	17.6	17.6	17.7	17.3	17.6
3	+ Imports of Ingot	na	160.4	143.2	134.3	105.0	98.6	63.6	80.6	85.6	62.4	32.4
4	+ Imports of Mill Products	na	30.9	34.6	31.7	24.0	17.0	20.0	22.6	20.4	15.8	12.0
5	+ Recovery of Secondary	na	10.3	9.8	10.7	13.3	11.5	7.8	10.2	8.9	7.3	6.8
6	− Exports of Ingot	na	0.7	0.2	0.2	—	—	1.5	0.6	1.0	—	—
7	− Exports of Mill Products	na	33.5	21.3	20.9	24.0	25.7	35.0	9.0	13.0	15.0	8.0
8	= Apparent Aluminum Consumption	na	184.5	183.2	168.2	133.1	118.6	72.5	121.4	118.6	87.8	60.8
13	Mid-Year Population (Millions)	na	41.1	40.6	40.0	39.3	38.7	38.2	37.6	37.0	36.4	35.9
14	= Per Capita Consumption (kg)[1]	na	4.5	4.5	4.2	3.4	3.1	1.9	3.2	3.2	2.4	1.7

NOTES:
(1) Without Inventory Change
na—Not received at publication time
—Less than 50 metric tons

SOURCE: Ministry of Commerce and Industry

Detail may not add to totals due to rounding

MEXICO

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	37.0	42.7	44.0	39.7	41.2	43.2	42.6	43.2	43.1	42.7	42.4
3. + Imports of Ingot	16.1	35.7	26.0	10.8	32.3	58.8	63.5	56.1	39.4	8.4	15.6
4. + Imports of Mill Products	39.7	68.7	34.5	12.9	62.2	82.9	49.4	36.4	29.2	16.3	30.8
5. + Recovery of Secondary	13.9	22.1	19.6	15.1	25.8	20.3	17.1	14.9	12.2	7.4	9.8
6. – Exports of Ingot	2.7	0.2	0.6	0.6	0.2	*	*	= m	= m	0.1	0.1
7. – Exports of Mill Products	9.4	16.9	7.5	1.7	1.1	3.1	3.4	3.1	3.7	2.4	1.5
8. = Apparent Aluminum Consumption	94.7	152.1	116.0	76.4	160.2	202.1	169.3	147.4	120.2	72.4	96.9
9. + Beginning Inventory	8.2	6.0	7.5	13.4	4.5	2.0	1.5	1.8	2.5	4.4	2.0
10. – Ending Inventory	6.7	8.2	6.0	7.5	13.4	4.5	2.0	1.5	1.8	2.5	4.4
11. = Inventory Change	–1.5	2.2	–1.5	–5.9	8.9	2.5	0.5	–0.3	–0.7	–1.8	2.4
12. = Aluminum Consumption	97.8	149.9	117.5	82.2	151.2	199.6	168.8	147.7	120.9	74.2	94.5
13. Mid-Year Population (Millions)	78.0	75.0	73.0	72.0	70.0	68.0	67.0	67.0	64.7	62.5	60.4
14. = Per Capita Consumption (kg)(1)	1.2	2.0	1.6	1.1	2.3	3.0	2.5	2.2	1.9	1.2	1.6
15. = Per Capita Consumption (kg)(2)	1.2	2.0	1.6	1.1	2.2	2.9	2.5	2.2	1.9	1.2	1.6

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change
**—Less than 50 metric tons*

Source: Instituto Mexicano del Aluminio, A.C.

NETHERLANDS

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	267.6	250.6	249.2	235.4	250.9	262.1	258.2	255.6	259.3	236.9	248.9
3. + Imports of Ingot	151.1	133.4	133.0	129.0	195.5	161.3	215.8	167.8	145.5	162.3	162.1
4. + Imports of Mill Products	134.5	126.0	120.5	115.7	105.4	92.4	113.3	106.5	83.0	91.7	95.1
5. + Recovery of Secondary	70.0	62.3	59.9	58.2	49.8	50.2	53.4	46.6	44.0	41.6	38.5
6. – Exports of Ingot	301.3	296.8	279.0	277.3	350.8	352.0	365.3	359.4	294.4	316.2	290.3
7. – Exports of Mill Products	121.2	109.4r	107.3	106.8	84.1	86.5	98.7	88.3	67.7	76.7	80.4
8. = Apparent Aluminum Consumption	200.7	166.1r	176.3	154.2	166.7	127.6	176.7	128.8	169.7	139.7	173.9
9. + Beginning Inventory	9.9	12.1r	10.7	10.7	7.8	10.3	7.9	43.7	35.4	54.2	64.3
10. – Ending Inventory	8.2	9.9r	6.8	11.5	9.6	8.7	10.3	7.7	60.0	35.3	56.4
11. = Inventory Change	–1.7	–2.2r	–3.9	0.8	1.8	–1.6	2.4	–36.0	24.6	–18.9	–7.9
12. = Aluminum Consumption	202.4	168.3r	180.2	153.4	164.9	129.2	174.3	164.8	145.2	158.6	181.8
13. Mid-Year Population (Millions)	14.5	14.5	14.4	14.4	14.3	14.2	14.1	14.0	13.9	13.9	13.8
14. = Per Capita Consumption (kg)(1)	13.8	11.5r	12.2	10.7	11.7	9.0	12.5	9.2	12.2	10.1	12.6
15. = Per Capita Consumption (kg)(2)	13.9	11.6r	12.5	10.7	11.5	9.1	12.4	11.8	10.4	11.4	13.2

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change
r—Revised

Source: Vereniging Nederlands Aluminium Instituut

NEW ZEALAND

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	236.2	241.6	241.6	220.1	163.1	154.3	154.5	154.1	149.9	143.6	138.4
3. + Imports of Ingot	0.1	0.5	1.4	6.6	7.2	3.4	= m	= m	= m	= m	= m
4. + Imports of Mill Products	5.0	3.7	3.6	2.9	3.1	2.6	2.4	3.4	2.8	3.4	2.1
5. + Recovery of Secondary	4.0	4.0	3.7	3.0	2.7	3.0	2.0	2.0	1.8	1.8	1.5
6. – Exports of Ingot	209.1	224.6	212.8	210.4	140.2	124.8	126.2	118.6	134.1	121.9	108.1
7. – Exports of Mill Products	5.4	9.5	6.2	5.4	7.7	5.7	5.4	2.7	1.9	1.2	0.5
8. = Apparent Aluminum Consumption	30.8	15.7	31.3	16.8	28.2	32.8	27.4	38.2	18.5	25.7	33.5
9. + Beginning Inventory	15.2	32.5	31.8	41.6	35.6	31.9	28.6	39.7	45.5	46.1	41.8
10. – Ending Inventory	12.6	15.2	32.5	31.8	41.6	35.6	31.9	28.6	39.7	45.5	46.1
11. = Inventory Change	–2.6	–17.3	0.7	–9.8	6.0	3.7	3.3	11.1	5.8	0.5	4.3
12. = Aluminum Consumption	33.4	33.0	30.6	26.6	22.2	29.1	24.1	27.1	24.3	25.1	29.2
13. Mid-Year Population (Millions)	3.28	3.27	3.23	3.19	3.16	3.13	3.10	3.15	3.13	3.13	3.12
14. = Per Capita Consumption (kg)(1)	9.4	4.8	9.7	5.3	8.9	10.5	8.8	12.1	5.9	8.2	10.7
15. = Per Capita Consumption (kg)(2)	10.2	10.1	9.5	8.3	7.0	9.3	7.8	8.6	7.8	8.0	9.4

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change

Source: Comalco Limited and New England Department of Statistics

Detail may not add to totals due to rounding

Per Capita Aluminum Consumption—Continued

NICARAGUA

Thousands of Metric Tons

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
3 + Imports of Ingot	na	na	na	na	na	na	na	na	0.5	1.2	0.5
4 + Imports of Mill Products	na	na	na	na	na	na	na	na	0.9	1.3	0.9
6 − Exports of Ingot	na	na	na	na	na	na	na	na	0.8	1.0	0.3
8 = Apparent Aluminum Consumption	na	na	na	na	na	na	na	na	0.6	1.5	1.2
13 Mid-Year Population (Millions)	na	na	na	na	na	na	na	na	2.4	2.3	2.2
14 = Per Capita Consumption (kg)[1]	na	na	na	na	na	na	na	na	0.3	0.6	0.5

NOTES:
(1) Without Inventory Change
na—Not received at publication time

Source: Ministerio de Economia Industria y Comercio, Managua

NORWAY

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1 + Primary Aluminum Production	729.1	724.1	760.8	715.4	645.1	636.1	662.0	673.5	656.9	636.9	620.8
3 + Imports of Ingot	35.1	34.7	31.6	11.2	21.0	14.8	16.4	8.9	8.0	8.5	31.8
4 + Imports of Mill Products	51.9	46.0	51.8	42.4	37.2	38.5	42.5	29.9	34.4	40.4	28.3
5 + Recovery of Secondary	—	—	2.3	0.7	2.8	2.8	3.5	3.6	4.0	4.0	5.0
6 − Exports of Ingot	646.5	643.8	638.7	637.4	545.4	524.0	521.2	565.3	630.1	555.3	561.6
7 − Exports of Mill Products	89.3	91.7	91.8	105.1	76.8	74.9	71.6	72.7	61.1	47.4	54.1
8 = Apparent Aluminum Consumption	80.3	69.3	116.0	27.2	83.8	93.3	131.7	78.0	12.1	87.2	70.1
11 + Inventory Change	4.7	−14.3	26.8	−27.4	−28.4	15.8	38.7	−18.5	−71.4	−5.2	−31.0
12 = Aluminum Consumption	75.6	83.6	89.2	54.6	112.2	77.5	93.0	96.5	83.5	92.4	101.2
13 Mid-Year Population (Millions)	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.0	4.0	4.0	4.0
14 = Per Capita Consumption (kg)[1]	19.6	16.9	28.3	6.6	20.4	22.7	32.1	19.5	3.0	21.8	17.5
15 = Per Capita Consumption (kg)[2]	18.4	20.4	21.8	13.3	27.4	18.9	22.7	24.1	20.9	23.1	25.3

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change

Source: Skan Aluminium

PANAMA

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
3 + Imports of Ingot	1.6	1.4	1.2	1.2	1.2	1.6	1.6	1.4	0.9	1.0	1.6
4 + Imports of Mill Products	0.4	0.4	3.6	1.6	0.1	0.2	0.1	0.3	0.3	0.3	0.3
5 + Secondary Recovery	0.7	0.7	0.6	0.6	0.6	0.5	0.4	0.4	0.3	0.5	0.4
6 − Exports of Ingot	0.5	0.4	0.3	0.2	—	—	—	—	—	—	—
7 − Exports of Mill Products	0.5	0.5	0.4	0.2	0.3	0.2	0.3	0.3	0.2	0.4	0.3
8 = Apparent Aluminum Consumption	1.8	1.8r	4.7	3.0	1.6	2.0	1.8	1.7	1.3	1.5	2.0
13 Mid-Year Population (Millions)	2.3	2.20	2.14	2.10	2.00	1.98	1.95	1.90	1.90	1.80	1.70
14 = Per Capita Consumption (kg)[1]	0.8	0.8	2.2	1.4	0.8	1.0	0.9	0.9	0.7	0.8	1.2

NOTES:
(1) Without Inventory Change

Source: Aluminio de Panama, S.A.

Detail may not add to totals due to rounding

PHILIPPINES, REPUBLIC OF

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
3. + Imports of Ingot	na	4.9	6.6	14.8	18.5	10.4	17.6	28.4	16.8	17.0	17.4
4. + Imports of Mill Products	na	6.4	7.4	8.9	13.6	4.4	5.5	7.9	4.3	3.6	2.3
6. – Exports of Ingot	na	—	—	—	*	*	*	—	—	—	0.2
7. – Exports of Mill Products	na	0.3	1.5	3.8	6.2	4.7	5.6	2.9	3.4	0.8	0.3
8. = Apparent Aluminum Consumption	na	11.0	12.5	20.0	25.9	10.1	17.5	33.4	17.6	19.8	19.2
13. Mid-Year Population (Millions)	na	54.7	53.4	52.1	50.8	49.5	48.3	47.1	45.9	44.7	43.5
14. = Per Capita Consumption (kg)(1)	na	0.2	0.2	0.4	0.5	0.2	0.4	0.7	0.4	0.4	0.4

NOTES:
(1) Without Inventory Change
**—Less than 50 metric tons*
na—Not received at publication time

Source: National Census and Statistics Office

PORTUGAL

	1986e	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
3. + Imports of Ingot	39.0	35.9r	26.1r	43.0	46.2r	40.1r	27.5	21.8	20.2	8.4	5.7
4. + Imports of Mill Products	16.3	13.4r	13.2r	15.3	17.9r	18.2r	16.6	14.9	16.6	26.4	20.0
5. + Recovery of Secondary	3.2	2.2r	2.4r	2.4	1.9	2.0r	2.7	3.8	3.1	2.1	2.0
6. – Exports of Ingot	—	2.0	0.8	0.3r	0.3r	0.3r	0.3	0.9	0.2	0.1	0.1
7. – Exports of Mill Products	12.4	11.2r	9.3r	14.9r	16.1r	10.6r	8.6	6.0	1.5	6.3	3.0
8. = Apparent Aluminum Consumption	46.1	38.4r	31.7r	45.4r	49.6r	49.4r	37.9	33.6	38.2	30.6	24.6
13. Mid-Year Population (Millions)	10.2	10.2r	10.1	10.0	9.9	9.9	9.8	9.8	9.8	9.7	9.7
14. = Per Capita Consumption (kg)(1)	4.5	3.8	3.1r	4.5r	5.0r	5.0r	3.9	3.4	3.9	3.2	2.5

NOTES:
(1) Without Inventory Change
e –Estimated

Source: National Statistical Institute

EL SALVADOR

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
3. + Imports of Ingot	1.7	0.5	1.2	1.1	0.9	1.3	1.6	2.4	2.4	2.0	1.7
4. + Imports of Mill Products	—	—	0.3	1.9	—	0.8	0.4	1.2	2.0	0.6	1.7
5. + Recovery of Secondary	0.1	0.5	0.5	0.5	0.6	0.6	0.7	0.9	1.0	1.7	0.7
7. – Exports of Mill Products	0.9	0.8	1.1	1.0	0.4	1.3	1.9	2.4	3.3	2.6	2.1
8. = Apparent Aluminum Consumption	0.9	0.2	1.0	2.5	1.2	1.5	0.8	2.1	2.2	1.7	2.1
13. Mid-Year Population (Millions)	4.97	4.85	4.78	4.83	4.74	4.60	4.50	4.40	4.40	4.30	4.10
14. = Per Capita Consumption (kg)(1)	0.17	0.04	0.20	0.52	0.25	0.32	0.18	0.47	0.49	0.40	0.51

NOTES:
(1) Without Inventory Change

Source: Aluminio de Centro America, S.A.

Detail may not add to totals due to rounding

Per Capita Aluminum Consumption—Continued

KINGDOM OF SAUDI ARABIA

Thousands of Metric Tons

		1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1	+ Primary Aluminum Production	—	—	—	—	*	*	—	—	—	—	—
3	+ Imports of Ingot	9.1	9.5	8.7	14.6	5.2	80.3	73.4	53.3	46.4	36.8	11.2
4	+ Imports of Mill Products	38.2	99.8	61.6	148.9	28.8	12.2	14.0	12.3	12.2	9.4	5.3
6	− Exports of Ingot	—	—	—	—	—	3.8	1.7	0.5	0.4	0.5	*
7	− Exports of Mill Products	—	—	—	—	0.5	*	0.2	0.5	0.2	0.5	0.1
8	= Apparent Aluminum Consumption	47.3	109.2	70.3	163.5	33.4	88.6	85.5	64.6	58.1	45.3	16.3
13	Mid-Year Population (Millions)	8.0	8.0	7.8	7.8	7.8	7.8	7.6	7.5	7.3	7.1	6.9
14	= Per Capita Consumption (kg)[1]	5.9	13.7	9.0	21.0	4.3	11.4	11.2	8.6	8.0	6.4	2.4

NOTES
(1) Without Inventory Change
**—Less than 50 metric tons*

Source: Saudi Basic Industries Corp.

SINGAPORE, REPUBLIC OF

		1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
3	+ Imports of Ingot	16.0	14.0	11.0	18.0	11.0	8.0	9.0	6.0	8.0	4.0	4.0
4	+ Imports of Mill Products	29.0	32.0	33.0	35.0	28.0	27.0	21.0	23.0	16.0	14.0	11.0
6	− Exports of Ingot	6.0	8.0	7.0	13.0	6.0	3.0	4.0	3.0	4.0	1.0	1.0
7	− Exports of Mill Products	9.0	8.0	7.0	14.0	7.0	4.0	4.0	4.0	4.0	1.0	1.0
8	= Apparent Aluminum Consumption	30.0	30.0	30.0	26.0	26.0	28.0	22.0	22.0	16.0	16.0	13.0
13	Mid-Year Population (Millions)	2.59	2.56	2.53	2.50	2.50	2.40	2.40	2.40	2.40	2.30	2.30
14	= Per Capita Consumption (kg)[1]	11.6	11.7	11.9	10.4	10.4	11.7	9.1	9.2	6.7	6.9	5.6

NOTES
(1) Without Inventory Change

Source: Department of Statistics, Singapore

SOUTH AFRICA, REPUBLIC OF

		1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1	+ Primary Aluminum Production	169.6	164.6	167.4	161.3	105.8	83.7	86.0	85.1	79.5	77.4	77.5
3	+ Imports of Ingot	0.4	0.4	0.2	0.4	0.7	1.8	0.3	0.6	0.6	0.4	0.6
4	+ Imports of Mill Products	17.0	16.5	11.8	14.8	10.8	12.0	11.1	7.1	6.5	5.9	9.7
5	+ Recovery of Secondary	27.0	25.0	28.2	31.7	27.2	28.3	27.2	16.5	10.2	9.6	4.8
6	− Exports of Ingot	92.4	90.5	82.7	110.5	24.6	2.9	12.9	33.1	38.5	29.1	15.4
7	− Exports of Mill Products	3.0	2.5	2.2	0.7	0.9	1.1	3.3	1.7	2.1	2.5	3.0
8	= Apparent Aluminum Consumption	118.6	113.5	122.7	97.0	119.0	121.8	108.4	74.5	56.2	61.6	74.2
11	+ Inventory Change	2.2	−2.5	8.0	−11.6	12.3	3.7	0.4	0.8	−7.2	−1.0	3.7
12	= Aluminum Consumption	116.4	116.0	114.7	108.6	106.7	118.1	108.0	73.7	63.4	62.6	70.5
13	Mid-Year Population (Mil.)[3]	28.0	27.4	26.8	26.1	26.2	25.6	24.1	28.2	27.3	26.7	26.1
14	= Per Capita Consumption (kg)[1]	4.2	4.1	4.6	3.7	4.5	4.8	4.5	2.6	2.1	2.3	2.8
15	= Per Capita Consumption (kg)[2]	4.2	4.2	4.3	4.2	4.1	4.6	4.5	2.6	2.3	2.3	2.7

NOTES
(1) Without Inventory Change
(2) Adjusted for Inventory Change
(3) 1980–1983 Population excludes independent homelands—Republics of Transkei, Bophutatswanda and Venda
1984 pres. Population excludes independent homelands—Republics of Transkei, Bophutatswanda, Venda and Ciskei

Source: Aluminium Federation of South Africa

Detail may not add to totals due to rounding

SPAIN

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	354.7	370.1	380.8	355.5	365.1	396.6	386.5	259.9	212.2	211.8	210.3
3. + Imports of Ingot	19.2	9.7	10.6	12.3	18.3	13.6	3.2	7.2	37.9	36.8	14.4
4. + Imports of Mill Products	40.0	20.6r	26.0	41.6	31.0	21.3	24.0	20.3	15.9	25.3	13.7
6. – Exports of Ingot	142.2	202.7	232.2	165.9	145.2	162.7	106.8	42.9	5.8	9.0	10.8
7. – Exports of Mill Products	43.3	41.8r	40.5	35.3	36.9	39.0	45.4	48.2	28.0	30.0	28.8
8. = Apparent Aluminum Consumption	228.4	155.9r	144.7	208.2	232.3	229.9	261.5	196.3	232.2	235.0	198.9
11. + Inventory Change	8.3	– 18.0	– 25.0	4.0	23.5	33.5	21.0	– 18.6	– 24.0	2.7	– 20.0
12. = Aluminum Consumption	220.1	173.9r	169.7	204.2	208.8	196.4	240.6	214.9	256.2	232.2	218.8
13. Mid-Year Population (Millions)	38.7	38.5	38.4	38.2	37.9	37.7	37.4	37.1	36.8	36.4	36.0
14. = Per Capita Consumption (kg)(1)	5.9	4.0r	3.8	5.5	6.1	6.1	7.0	5.3	6.3	6.5	5.5
15. = Per Capita Consumption (kg)(2)	5.9	4.5r	4.4	5.3	5.5	5.2	6.4	5.8	7.0	6.4	6.1

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change

Source: Aluminio de Galicia, S.A.

SWEDEN

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	77.1	83.7	82.9	82.2	78.9	82.8	81.6	82.0	82.0	82.6	81.4
3. + Imports of Ingot	54.3	46.3	48.5	49.7	45.5	38.7	36.9	36.7	34.2	43.4	46.7
4. + Imports of Mill Products	87.5	82.0	87.4	86.3	74.0	63.0	64.4	65.4	55.1	59.3	64.0
5. + Recovery of Secondary	41.9	39.4r	37.0r	29.0r	27.2r	26.7r	24.5	24.0	25.0	24.5	24.0
6. – Exports of Ingot	39.4	41.8	38.2	39.2	35.2	37.8	17.7	19.6	38.5	32.5	13.3
7. – Exports of Mill Products	50.7	42.9	40.4	50.6	46.3	43.0	47.1	57.8	53.6	46.4	42.5
8. = Apparent Aluminum Consumption	170.7	166.7r	178.3r	157.5r	144.1r	130.4r	142.6	130.7	104.2	130.9	160.3
11. + Inventory Change	+ 1.1	– 5.3	5.8	– 2.0	– 6.7	– 0.7	12.9	– 8.1	– 18.5	1.2	8.6
12. = Aluminum Consumption	171.8	172.0r	172.5r	159.5r	150.8r	131.1r	129.7	138.8	122.7	129.7	151.7
13. Mid-Year Population (Millions)	8.4	8.4	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.2
14. = Per Capita Consumption (kg)(1)	20.4	20.0r	21.4r	18.9r	17.3r	15.7r	17.1	15.7	12.6	15.8	19.5
15. = Per Capita Consumption (kg)(2)	20.6	20.6r	20.7r	19.1r	18.1r	15.8r	15.6	16.7	14.8	15.6	18.5

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change
r—Revised

Source: National Central Bureau of Statistics and Granges Aluminium

SWITZERLAND

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	80.6	72.6	79.2	76.0	75.3	82.5	86.3	83.0	79.6	79.8	78.2
3. + Imports of Ingot	86.7	77.2r	62.8	57.2	47.4	36.1	52.8	39.6	33.9	39.2	31.1
4. + Imports of Mill Products	65.2	62.2	56.1	52.7	47.1	47.9	51.6	42.6	36.1	31.3	24.5
5. + Recovery of Secondary	25.5	26.1	23.0	21.1	18.7	20.6	19.4	19.2	17.9	20.1	17.8
6. – Exports of Ingot	23.4	19.9	25.7	26.7	25.4	22.7	22.8	26.4	17.6	16.4	19.1
7. – Exports of Mill Products	99.3	95.1	84.3	80.4	70.5	66.0	72.0	76.6	67.2	70.4	58.7
8. = Apparent Aluminum Consumption	135.3	123.1r	111.1	99.9	92.6	98.3	115.3	81.6	82.6	83.6	73.8
11. + Inventory Change	2.7	0.1	– 7.3	3.1	– 4.2	– 0.7	5.9	– 6.7	– 1.0	1.9	– 5.9
12. = Aluminum Consumption	132.6	123.0r	118.4	96.8	96.8	99.1	109.4	88.3	83.6	81.7	79.7
13. Mid-Year Population (Millions)	6.5	6.5	6.5	6.5	6.5	6.4	6.4	6.2	6.2	6.3	6.3
14. = Per Capita Consumption (kg)(1)	20.7	18.9r	17.1	15.4	14.3	15.4	18.0	13.2	13.3	13.3	11.7
15. = Per Capita Consumption (kg)(2)	20.3	18.9r	18.2	15.0	15.0	15.5	17.1	14.2	13.5	13.0	12.7

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change
r—Revised

Source: Vereinigung Schweizerischer Aluminium Halbzeugwerke

Detail may not add to totals due to rounding

Per Capita Aluminum Consumption—Continued

Thousands of Metric Tons

TAIWAN, REPUBLIC OF CHINA

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	na	—	—	—	10.0	30.0	62.5	56.2	50.4	29.8	25.5
3. + Imports of Ingot	na	147.2	99.9	139.1	88.6	47.7	58.3	52.9	47.6	52.5	36.4
4. + Imports of Mill Products	na	32.4	22.8	23.2	15.0	9.7	9.6	11.3	7.3	5.8	6.2
5. + Recovery of Secondary	na	3.6	5.3	24.2	15.5	16.8	19.2	13.8	9.5	8.7	6.2
6. − Exports of Ingot	na	5.8	3.1	2.6	0.6	—	*	*	0.4	0.1	0.3
7. − Exports of Mill Products	na	29.6	17.3	18.4	14.0	19.2	17.2	15.1	7.4	3.6	3.6
8. = Apparent Aluminum Consumption	na	147.8	107.6	165.5	114.5	85.0	132.5	119.1	107.0	93.1	70.3
11. + Inventory Change	na	na	na	na	0.9	−33.6	23.9	0.1	7.8	13.9	6.0
12. = Aluminum Consumption	na	na	na	na	113.6	118.6	108.6	119.0	99.2	79.2	64.3
13. Mid-Year Population (Millions)	na	19.0	18.8	18.6	18.3	18.0	17.8	17.5	17.0	16.7	16.3
14. = Per Capita Consumption (kg)(1)	na	7.8	5.7	8.9	6.3	4.7	7.4	6.8	6.3	5.6	4.3
15. = Per Capita Consumption (kg)(2)	na	na	na	na	6.2	6.6	6.1	6.8	5.8	4.7	3.9

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change
**—Less than 50 metric tons*

Source: Taiwan Aluminium Corporation

TURKEY, REPUBLIC OF

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	142.2	113.3r	75.1r	57.4r	84.2r	131.4r	35.0	34.1	40.7	46.8	41.0
3. + Imports of Ingot	38.0	60.0r	68.5	60.0	35.1	60.1	6.4	13.0	11.2	40.9	26.9
4. + Imports of Mill Products	44.0	66.0r	3.1	5.7	8.6	10.8	21.6	7.0	1.7	3.0	3.9
6. − Exports of Ingot	—	—	0.2	1.3	1.0	—	—	—	—	—	—
7. − Exports of Mill Products	24.0	29.0r	27.1	21.4	14.3	22.1	16.0	6.0	6.2	9.8	8.8
8. = Apparent Aluminum Consumption	200.2	210.3r	119.4r	100.4r	112.6r	180.2r	47.0	48.1	47.4	80.9	63.0
13. Mid-Year Population (Millions)	49.3	49.3	48.3	47.3	46.3	45.3	44.4	43.5	42.6	41.8	40.9
14. = Per Capita Consumption (kg)(1)	4.1	4.3r	2.5r	2.1r	2.4r	4.0r	1.1	1.1	1.1	1.9	1.5

NOTES:
(1) Without Inventory Change
r—Revised

Source: State Institute of Statistics

UNITED KINGDOM

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	275.9	275.4	287.9	252.5	240.8	339.2	374.5	359.4	346.2	348.9	334.4
3. + Imports of Ingot	180.6	145.8	170.2	162.4	154.8	123.3	169.4	182.1	185.2	197.4	217.9
4. + Imports of Mill Products	240.6	227.5	234.2	224.2	200.6	157.4	145.0	179.4	157.9	130.3	112.1
5. + Recovery of Secondary	110.1	121.9	137.1	122.6	108.4	140.7	150.0	159.9	174.2	182.3	187.8
6. − Exports of Ingot	110.3	121.1	118.2	126.5	117.5	168.5	188.9	200.0	155.5	142.7	158.2
7. − Exports of Mill Products	121.4	104.5	104.7	90.9	93.0	77.6	101.6	71.2	59.9	64.2	59.6
8. = Apparent Aluminum Consumption	575.5	545.0	606.5	544.3	494.1	514.6	548.3	609.6	648.0	651.9	634.4
9. + Beginning Inventory	105.2	119.4	118.7	106.4	85.1	97.4	96.1	46.2	72.6	90.9	92.2
10. − Ending Inventory	95.1	105.2	119.4	118.7	106.4	85.1	97.4	96.1	46.2	72.6	90.9
11. = Inventory Change	−10.1	−14.2	0.7	12.3	21.3	−12.3	1.4	49.9	−26.4	−18.3	−1.3
12. = Aluminum Consumption	585.6	559.2	605.8	532.0	472.8	526.9	546.9	559.7	674.4	670.2	635.7
13. Mid-Year Population (Millions)	56.7	56.6r	56.4	56.0	56.0	68.0	67.0	55.8	55.9	55.9	56.1
14. = Per Capita Consumption (kg)(1)	10.1	9.6r	10.8	9.7	8.8	7.6	8.2	10.9	11.6	11.7	11.3
15. = Per Capita Consumption (kg)(2)	10.3	9.9r	10.7	9.5	8.4	7.7	8.2	10.0	12.1	12.0	11.3

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change
r—Revised

Source: Aluminium Fedderation, Ltd.

Detail may not add to totals due to rounding

UNITED STATES of AMERICA

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	3,038.7	3,499.7	4,099.1	3,353.3	3,273.7	4,488.7	4,653.6	4,556.9	4,358.0	4,117.5	3,856.8
2. ± Gov't Stockpile Adj.	—	—	—	—	—	—	—	—	—	—	8.3
3. + Imports of Ingot	1,348.8	868.7	882.0	742.7	616.3	644.7	526.8	517.8	687.5	608.1	522.0
4. + Imports of Mill Products	493.9	463.0	494.3	280.5	206.7	137.9	76.2	193.4	219.7	74.8	85.7
5. + Recovery of Secondary	1,739.0	1,762.0	1,760.0	1,773.0	1,665.6	1,789.9	1,576.7	1,612.1	1,517.7	1,456.0	1,334.5
6. − Exports of Ingot	209.6	347.3	259.6	360.7	363.9	312.3	648.6	182.1	114.9	88.7	138.3
7. − Exports of Mill Products	203.5	199.3	228.7	202.1	223.4	309.2	346.3	282.0	224.2	234.3	234.0
8. = Apparent Aluminum Consumption	6,207.3	6,046.8	6,747.0	5,586.6	5,175.1	6,439.8	5,838.5	6,416.2	6,443.9	5,933.3	5,435.2
9. + Beginning Inventory	2,342.8	2,653.7	2,265.4	2,811.8	2,996.7	2,302.5	2,324.8	2,492.1	2,588.4	2,585.9	2,721.0
10. − Ending Inventory	2,235.3	2,342.8r	2,653.7	2,265.4	2,812.0	2,996.7	2,302.5	2,324.8	2,492.1	2,588.4	2,585.9
11. = Inventory Change	−107.5	−310.9r	388.3	−546.5	−184.7	694.3	−22.3	−167.3	−96.3	2.5	−135.2
12. = Aluminum Consumption	6,314.8	6,357.7	6,358.7	6,133.1	5,359.8	5,745.5	5,860.8	6,583.5	6,540.2	5,930.8	5,570.4
13. Mid-Year Population (Millions)	241.0	238.7	236.5	234.0	231.5	229.3	227.7	220.6	217.7	216.8	215.1
14. = Per Capita Consumption (kg)(1)	25.8	25.3	28.5	23.9	22.4	28.1	25.6	29.1	29.6	27.4	25.3
15. = Per Capita Consumption (kg)(2)	26.2	26.6	26.9	26.2	23.2	25.1	25.7	29.8	30.0	27.4	25.9

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change
r—Revised

Source: the Aluminum Association, Inc

VENEZUELA

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977	1976
1. + Primary Aluminum Production	421.0	404.0	387.0r	338.0r	273.6	313.5	321.3	210.3	67.1	43.4	46.4
3. + Imports of Ingot	6.0	3.0	0.4r	0.3r	0.9	0.4	0.2	9.1	—	7.9	2.0
4. + Imports of Mill Products	17.0	19.0	21.0	13.0	25.7	23.8	24.8	15.3	27.1	15.4	9.5
5. + Recovery of Secondary	24.0	21.0	14.0	20.0	10.0	10.0	10.0	10.2	10.0	1.3	2.4
6. − Exports of Ingot	247.0	297.0	179.0r	292.0r	208.5	239.0	217.3	123.4	28.1	10.4	17.6
7. − Exports of Mill Products	103.0	106.0	68.0r	22.0r	0.2	24.4	37.1	23.0	—	—	—
8. = Apparent Aluminum Consumption	118.0	44.0	179.0r	60.0r	101.5	84.3	101.9	98.4	76.1	57.5	42.8
9. + Beginning Inventory	62.0	97.0	22.0	68.0r	48.8	25.4	20.2	10.1	1.1	3.7	8.5
10. − Ending Inventory	61.0	60.0	99.0	22.0r	55.9	48.8	25.4	20.2	10.2	5.5	3.2
11. = Inventory Change	1.0	37.0	77.0	46.0r	7.1	23.4	5.2	10.2	9.1	1.8	−5.4
12. = Aluminum Consumption	119.0	81.0	102.0r	116.0r	94.4	60.9	96.7	88.3	67.0	55.7	48.2
13. Mid-Year Population (Millions)	17.8	17.3	16.9r	16.5r	14.9	14.6	13.9	13.5	13.1	12.7	12.9
14. = Per Capita Consumption (kg)(1)	6.6	2.5	10.6r	3.6r	6.8	5.8	7.3	7.3	5.8	4.5	3.3
15. = Per Capita Consumption (kg)(2)	6.7	4.7	6.0r	6.4r	6.3	4.2	7.0	6.5	5.1	4.4	3.7

NOTES:
(1) Without Inventory Change
(2) Adjusted for Inventory Change
r—Revised

Source: Aluminio del Caroni, S.A.

ACSR AND ALUMINUM CABLE, BARE—Aluminum stranded conductor reinforced by a core of steel (ACSR), or aluminum (ACAR); or any other bare stranded aluminum conductor.

ATOMIZED POWDER—Powder produced by blowing or asperating molten metal through an orifice.

CASTING—A product made by pouring molten metal into a mold of a desired shape and letting it harden.

CONDUCTOR REDRAW ROD (CONTINUOUS-CAST OR ROLLED)—A solid round product that is long in relation to cross section, 0.375" or greater in diameter, produced by continuous casting followed by size-rolling, or by rolling from D.C. cast ingot, suitable for drawing into electrical conductor wire.

DIRECT MILL USES—Finished product applications supplied for the most part directly from mills rather than from distributors or jobber warehouses.

DRAWING STOCK (Redraw Rod)—See Conductor or Non Conductor Redraw Rod.

DRAWN TUBE—A hollow product that is long in relation to its cross section, which is round, square, rectangular, hexagonal, octagonal, or elliptical in shape, and brought to final dimensions by drawing.

DROSS AND SKIMMINGS—The mixture of oxides and other impurities which float to the surface of molten aluminum and is skimmed off.

EXTRUDED PIPE AND TUBE—A hollow product formed by extruding that is long in relation to its cross section, which is round, square, rectangular, hexagonal, octagonal, or elliptical in shape.

EXTRUDED ROD AND BAR—A solid product produced by extruding (sometimes brought to final dimensions by drawing) that is long in relation to cross section, which is round, square, rectangular, hexagonal, or octagonal in shape and 0.375" or greater in diameter or in at least one perpendicular distance between parallel faces.

EXTRUDED SHAPES—A product produced by extruding, that is long in relation to its cross-sectional dimensions and has a cross section other than that of rod and bar and pipe and tube.

EXTRUSION INGOT (BILLET)—A solid or hollow cast form, usually cylindrical, suitable for extruding.

FLAKED POWDER—Powder consisting of flat or scale-like particles of a thickness small compared with other dimensions, produced by milling in the presence of a lubricant.

FOIL—A flat rolled product, rectangular in cross section, of thickness less than 0.006".

FORGINGS (EXCLUDING IMPACT EXTRUSIONS)—A product worked to a predetermined shape by one or more processes such as hammering, upsetting, pressing, rolling, etc.

GENERAL LINE DISTRIBUTOR—Warehouses and sells a number of mill products to a wide variety of customers.

IMPACTS (EXCLUDING COLLAPSIBLE TUBES AND CANS)—A product formed in a confining die from a metal slug, usually cold, by rapid single stroke application of force through a punch, causing the metal to flow around the punch and/or through an opening in the punch or die.

The 1987 Cadillac Allante's body, which is produced by Italian coachbuilder Pininfarina, has an aluminum hood, deck lid, and a 58-pound aluminum hardtop that requires no tools for removal. The luxury automobile is equipped with forged aluminum wheels and is powered by a transverse-mounted aluminum block V8 engine.

INTEGRATED PRODUCER (OR SUPPLIER)—For statistical reporting, a company which produces primary aluminum ingot in the United States and produces mill products from it.

METALLURGICAL/DESTRUCTIVE USES—Applications wherein, because of the way it is used, aluminum either loses its identity or is lost and cannot be recovered. Major uses include the deoxidizing of steel and reduction of ferroalloys; steel and other nonferrous metal alloys; steel coating; and such other applications as chemicals and catalysts.

MILL PRODUCTS—Metal that has been fashioned into an intermediate or semifabricated form in preparation for making a finished product. Example: sheet, a mill product, is used to make residential siding, a finished product.

NET SHIPMENTS—Excludes intra-industry shipments for further fabrication. It is the most accurate measure of industry output to markets because it eliminates duplication. Reported receipts of aluminum for further processing are subtracted.

NONCONDUCTOR REDRAW ROD (CONTINUOUS-CAST OR ROLLED)—A solid round product that is long in relation to cross section, 0.376″ or greater in diameter, produced by continuous casting followed by size-rolling, or by rolling from D.C. cast ingot, suitable for drawing into nonconductor wire.

NONINTEGRATED FABRICATOR (OR SUPPLIER)—For statistical reporting, a U.S. mill product fabricator which is not affiliated with a domestic primary ingot producer.

OTHER INGOT AND MOLTEN METAL, PRIMARY—For statistical purposes, a cast form other than extrusion ingot (or molten metal), shipped by an integrated producer or nonintegrated fabricator from a company-owned facility not exclusively devoted to producing secondary ingot.

OTHER INGOT AND MOLTEN METAL, SECONDARY—For statistical purposes, a cast form other than extrusion ingot (or molten metal), principally produced from aluminum scrap to specification by secondary smelters (or others at a facility exclusively devoted to producing ingot from scrap for sale); excludes remelt scrap ingot (RSI) which is considered scrap until remelted and cast into specification ingot.

OTHER ROD AND BAR (CONTINUOUS-CAST OR ROLLED)—A solid, round, square, rectangular, hexagonal, or octagonal in shape produced by continuous casting or rolling, that is long in relation to cross section, 0.375″ or greater in diameter or in at least one perpendicular distance between parallel faces; other than redraw rod and D.C. cast ingot.

PASTE—A blend of powder or flake with a thinner or plasticizer.

PLATE, NONHEAT-TREATABLE—A flat rolled product, rectangular in cross section, 0.250″ or greater in thickness, which can be strengthened only by cold work.

PLATE, HEAT-TREATABLE—A flat rolled product, in 2000, 6000, or 7000 alloy series (except 7072), rectangular in cross section, 0.250″ or greater in thickness, which can be strengthened by a suitable thermal treatment.

POWDER—An aggregate of discrete particles of aluminum, substantially all of which are finer than 1,000 microns (minus 18 mesh).

RECEIPTS—The metal physically received by a company for further processing.

REIMPORTS—Mill products that have been exported, partially processed outside the United States, and imported back to the United States while still in a mill product stage.

ROLLED STRUCTURAL SHAPES—A structural shape produced by hot rolling.

SCRAP—Includes "New" (prompt industrial) scrap, purchased, imported, or treated on toll, in all forms; and "Old" (post consumer or obsolete) scrap, including sweated pig; also remelt scrap ingot (RSI) which is considered scrap until remelted and cast into specification ingot.

SECONDARY SMELTER—A company whose facilities are exclusively devoted to producing ingot or molten aluminum from scrap.

SEMIFABRICATED PRODUCTS—See Mill Products.

SHEET, NONHEAT-TREATABLE—A rolled product, flat or coiled, rectangular in cross section, of 0.006″ thickness but under 0.250″ thickness, which can be strengthened only by cold work.

SHEET, HEAT-TREATABLE—A rolled product, in 2000, 6000, or 7000 alloy series (except 7072), flat or coiled, rectangular in cross section, of 0.006″ thickness but under 0.250″ thickness, which can be strengthened by a suitable thermal treatment.

STATISTICAL ADJUSTMENT—An adjustment made to product shipment data to account for net shipments of aluminum reported by the Bureau of the Census which are believed to be either over- or understated in the amounts indicated due to excessive or insufficient reporting. It also includes otherwise unpublished Census revisions. The addition of the statistical adjustment reconciles the amounts reported by the Bureau of the Census with the net shipments that the Aluminum Association feels are more correct.

WELDED TUBE—A hollow product that is long in relation to its cross section, which is round, square, rectangular, hexagonal, octagonal, or elliptical in shape, produced by forming and seam-welding sheet longitudinally.

WIRE, BARE, CONDUCTOR AND NONCONDUCTOR—A solid wrought product that is long in relation to its cross section, which is square, round, rectangular, hexagonal, or octagonal in shape, whose diameter or greatest perpendicular distance between parallel faces (except for flattened wire) is less than 0.375″.

WIRE AND CABLE, INSULATED OR COVERED—Aluminum electrical conductor wire or stranded conductors that are insulated or covered.

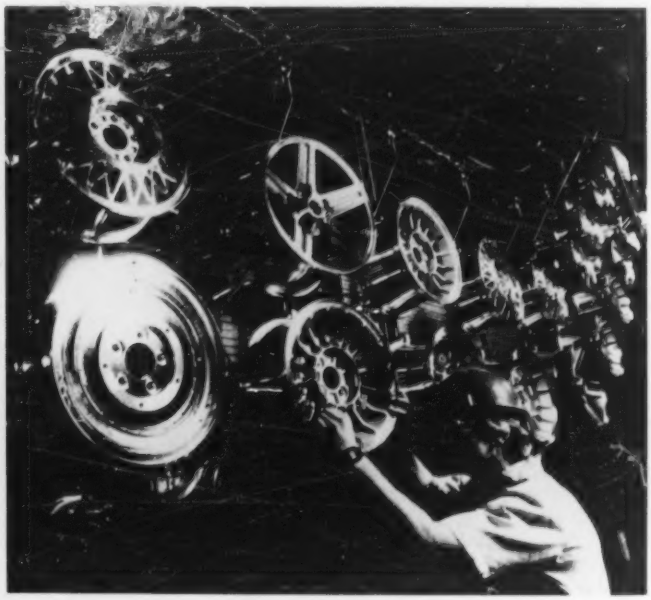
Publications

The following publications are available from the Aluminum Association, Inc.

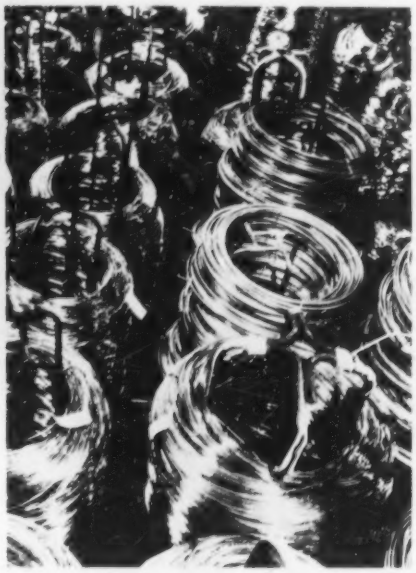
Aluminum Situation (monthly)
U.S. Exports and Imports of Aluminum (monthly and quarterly)
Aluminum Extrusion Press Directory (1985)
Aluminum Statistical Review Historical Supplement
U.S. Aluminum Industry Plant Directory (1985)
Publications Guide of the Aluminum Association
Film Guide of the Aluminum Association
About the Aluminum Association (a brochure)

Write to the Publications Department, the Aluminum Association, Inc., 900 19th Street, N.W., Washington, D.C. 20006.

Aluminum nails, shown in production from wire, protect a home's appearance by not leaving unsightly rust spots. Strong and durable, they come in various sizes and shapes with special holding characteristics, such as large gutter spikes, cedar and redwood decking nails, and aluminum, wood and vinyl siding nails.



Cast aluminum wheels for the OEM (original equipment manufacturer) and replacement automotive market are an increasingly popular choice for passenger cars.



Aluminum wire, shown here being prepared for shipment, has myriad uses ranging from fine florist wire to hypodermic needles, distributor caps, spark plugs and other automotive parts, ball bearings, knitting needles and crochet hooks, nails and even shoes for race horses.

the Aluminum Association
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